ThinkPad®

Personal Systems Reference Lenovo® ThinkPad® Notebooks

November 2011 - Version 409

*Visit **www.lenovo.com/psref** for the latest version*

ThinkPad®

ThinkVision® LT1421 with ThinkPad X1

ThinkPad Bluetooth Laser Mouse
41U5008

USB 2.0 Portable Secure Hard Disk
320GB 43R2019

ThinkPad Mini Dock Plus Series 3 - 90W
433810U

ThinkPad 65W AC Adapter with USB Hub
57Y4600

90W Ultraslim AC/DC Combo Adapter
41R4493

ThinkPad®

Lenovo® ThinkPad Tablet

Lenovo ThinkPad Tablet

Lenovo ThinkPad Tablet with
ThinkPad Tablet Keyboard Folio Case
0A36370

Lenovo ThinkPad Tablet

Lenovo ThinkPad Tablet with
ThinkPad Tablet Pen
0A33887

Lenovo ThinkPad Tablet

ThinkPad®

Lenovo® ThinkPad Tablet with
ThinkPad Tablet Keyboard Folio Case
0A36370

Lenovo ThinkPad Tablet with
ThinkPad Tablet DC Charger
0A36247

Lenovo ThinkPad Tablet with
ThinkPad Tablet Keyboard Folio Case
0A36370

ThinkPad Tablet AC Charger
0A36248

Lenovo ThinkPad Tablet with
ThinkPad Tablet Dock
0A33953

Lenovo ThinkPad Tablet with
ThinkPad Tablet Folio Case
0A36405

ThinkPad® Tablet (1838) - TopSeller

Type-model	Processor	Memory	Widescreen display	ThinkPad Tablet Pen	Camera Front/Rear (MP)	Storage	Keyboard Folio Case	ThinkPad Tablet Dock	WLAN 802.11	PCIe Mini Card WWAN	Carrier	GPS	Blue-tooth	Preload
1838-28U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	64G		Dock	11b/g/n[28]	None	None	GPS	Blue	Android 3.1
1838-27U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	64G			11b/g/n	None	None	GPS	Blue	Android 3.1
1838-26U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	32G	Keyboard		11b/g/n	None	None	GPS	Blue	Android 3.1
1838-25U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	32G			11b/g/n	None	None	GPS	Blue	Android 3.1
1838-24U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	16G	Keyboard		11b/g/n	None	None	GPS	Blue	Android 3.1
1838-23U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	16G			11b/g/n	None	None	GPS	Blue	Android 3.1
1838-22U	Cortex-A9	1GB	10.1" WXGA		2.0/5.0	16G			11b/g/n	None	None	GPS	Blue	Android 3.1

- *Small and medium business (SMB) model(s), part of the US TopSeller™ Program*

Positioning	*Touchscreen tablet for on-the-go business*
Processor	**Dual-core ARM Cortex™-A9 processor** (1.0 GHz per core), 1MB L2 cache
Memory	1GB / 600MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets
Storage	16GB, 32GB, or 64GB / eMMC (embedded Multi Media Card) flash memory on board
Multicard reader	3-in-1 reader (SD, SDHC, MMC), SD card encryption supported
Graphics	**NVIDIA® ULP (Ultra-low power) GeForce GPU**, integrated in Tegra™ 2, supports 1080p video out via mini-HDMI connector, HDCP-compliant
Display	**10.1"** (256.5mm) **WXGA (1280x800) TFT color**, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports pen & six-finger gesture
Tablet pen	*Some:* ThinkPad Tablet Pen (0A33887), supports hover, tip, and pressure modes / a button for "long press" function / user replaceable AAAA battery, up to 18 months
Camera	*Front camera:* 2.0-megapixel, fixed focus *Rear camera:* 5.0-megapixel, auto focus, digital zoom
Video capture	720p video capture (back camera)
Audio support	High Definition (HD) Audio, Wolfson WM8903 codec / monaural speaker, 0.5 watt x 1 / analog monaural microphone, combo audio/microphone jack
Ear buds	None
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid
Control buttons	Power button, volume control button, reset switch, 4 function buttons (Home, Back, Open Browser, Display Lock)
Keyboard folio case	*Some:* ThinkPad Tablet Keyboard Folio Case (0A36370), connects with system via USB 2.0, 6 row, TrackPoint® pointing device, leather cover, magnetic 3-position landscape stand
ThinkPad tablet dock	*Some:* ThinkPad Tablet Dock (0A33953), one USB 2.0, one micro-USB 2.0 (not for power supply), microphone input jack, headphone jack, DC-IN connector (supports 65W AC Adapter, RapidCharge)
Light sensor	Ambient Light Sensor
Proximity sensor	Proximity sensor, Azoteq IQS128
G-sensor	Accelerometer (G) sensor, supports 3-axis accelerometer
Gyroscope	3-axis gyroscope
eCompass	3-axis electronic compass, AKM AK8975C
Platform	**NVIDIA Tegra 2 T20**
Ports	One USB 2.0, one micro-USB 2.0 (power supply / charging support), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet Dock connector
WLAN	11b/g/n wireless[4], Azurewave AW-NH931 module, WiFi + BT combo chip
WWAN	None
Carrier	None
GPS	Global Positioning System, Broadcom BCM4751
Bluetooth™	Bluetooth 2.1+EDR wireless, integrated in Azurewave AW-NH931 combo chip, supports BT 3.0
Dimensions[3]	10.25" x 7.15" x 0.57"; 260.4mm x 181.7mm x 14.5mm
Weight[2]	*WiFi model:* from 1.64 lb (0.74kg); *3G model:* from 1.67 lb (0.76kg)
Case color	Black
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
System states	Active, Deep Sleep, Off
Battery - type	Lithium Polymer 2-cell
Battery - life[10]	up to 5 days (suspend); up to 10 hr (idle); up to 9 hr (WiFi browsing); up to 8 hr (3G browsing and video playback)
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Android™ 3.1 (HoneyComb)

Preloaded applications[14] (only some listed)
- Lenovo App Shop
- Documents To Go®
- MyScript Notes Mobile
- USB Data Transfer Utility
- User Data and SD Card Encryption
- Lenovo SocialTouch
- PrinterShare™ Mobile Print
- McAfee® Mobile Security
- Google Voice Search
- Google Talk
- Google Maps
- Netflix
- YouTube app
- Adobe® Flash player 10.2
- Slacker Radio
- Amazon MP3
- mSpot Music
- mSpot Movies
- Google Books
- Kindle for Android
- Zinio Magazine Reader
- eBuddy Messenger
- PokeTALK Tablet Version
- ooVoo™ Video Calls
- Angry Birds
- ArcSoft® PowerMobia® Gallery
- ArcSoft PowerMobia eBook Reader and Bookshelf

10W AC Adapter (via micro-USB)
Optional: 65W AC Adapter (via Dock)
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-Tablet sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-Tablet sheet

See footnotes for more detailed information
US model(s) announced August 16, 2011

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ThinkPad® Tablet (1839)

Type-model	Processor	Memory	Widescreen display	ThinkPad Tablet Pen	Camera Front/Rear (MP)	Storage	Keyboard Folio Case	ThinkPad Tablet Dock	WLAN 802.11	PCIe Mini Card WWAN	Carrier	GPS	Blue-tooth	Global (G) GMP (P)	Preload
1839-28U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	64G		Dock	11b/g/n[28]	None	None	GPS	Blue	G	Android 3.1
1839-27U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	64G			11b/g/n	None	None	GPS	Blue	G	Android 3.1
1839-26U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	32G	Keyboard		11b/g/n	None	None	GPS	Blue	G	Android 3.1
1839-25U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	32G			11b/g/n	None	None	GPS	Blue	G	Android 3.1
1839-24U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	16G	Keyboard		11b/g/n	None	None	GPS	Blue	G	Android 3.1
1839-23U	Cortex-A9	1GB	10.1" WXGA	Pen	2.0/5.0	16G			11b/g/n	None	None	GPS	Blue	G	Android 3.1
1839-22U	Cortex-A9	1GB	10.1" WXGA		2.0/5.0	16G			11b/g/n	None	None	GPS	Blue	G	Android 3.1

Positioning	*Touchscreen tablet for on-the-go business*
Processor	**Dual-core ARM Cortex™-A9 processor** (1.0 GHz per core), 1MB L2 cache
Memory	1GB / 600MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets
Storage Multicard reader	16GB, 32GB, or 64GB / eMMC (embedded Multi Media Card) flash memory on board 3-in-1 reader (SD, SDHC, MMC), SD card encryption supported
Graphics Display Tablet pen	**NVIDIA® ULP (Ultra-low power) GeForce GPU**, integrated in Tegra™ 2, supports 1080p video out via mini-HDMI connector, HDCP-compliant **10.1"** (256.5mm) **WXGA (1280x800) TFT color**, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports pen & six-finger gesture *Some:* ThinkPad Tablet Pen (0A33887), supports hover, tip, and pressure modes / a button for "long press" function / user replaceable AAAA battery, up to 18 months
Camera Video capture	*Front camera:* 2.0-megapixel, fixed focus *Rear camera:* 5.0-megapixel, auto focus, digital zoom 720p video capture (back camera)
Audio support Ear buds	High Definition (HD) Audio, Wolfson WM8903 codec / monaural speaker, 0.5 watt x 1 / analog monaural microphone, combo audio/microphone jack None
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid
Control buttons Keyboard folio case ThinkPad tablet dock	Power button, volume control button, reset switch, 4 function buttons (Home, Back, Open Browser, Display Lock) *Some:* ThinkPad Tablet Keyboard Folio Case (0A36370), connects with system via USB 2.0, 6 row, TrackPoint® pointing device, leather cover, magnetic 3-position landscape stand *Some:* ThinkPad Tablet Dock (0A33953), one USB 2.0, one micro-USB 2.0 (not for power supply), microphone input jack, headphone jack, DC-IN connector (supports 65W AC Adapter, RapidCharge)
Light sensor Proximity sensor G-sensor Gyroscope eCompass	Ambient Light Sensor Proximity sensor, Azoteq IQS128 Accelerometer (G) sensor, supports 3-axis accelerometer 3-axis gyroscope 3-axis electronic compass, AKM AK8975C
Platform Ports	**NVIDIA Tegra 2 T20** One USB 2.0, one micro-USB 2.0 (power supply / charging support), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet Dock connector
WLAN WWAN Carrier GPS Bluetooth™	11b/g/n wireless[4], Azurewave AW-NH931 module, WiFi + BT combo chip None None Global Positioning System, Broadcom BCM4751 Bluetooth 2.1+EDR wireless, integrated in Azurewave AW-NH931 combo chip, supports BT 3.0
Dimensions[3] Weight[2] Case color Case material	10.25" x 7.15" x 0.57"; 260.4mm x 181.7mm x 14.5mm *WiFi model:* from 1.64 lb (0.74kg); *3G model:* from 1.67 lb (0.76kg) Black PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
System states Battery - type Battery - life[10]	Active, Deep Sleep, Off Lithium Polymer 2-cell up to 5 days (suspend); up to 10 hr (idle); up to 9 hr (WiFi browsing); up to 8 hr (3G browsing and video playback)
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Android™ 3.1 (HoneyComb)

Preloaded applications[14] (only some listed)
- Lenovo App Shop
- Documents To Go®
- MyScript Notes Mobile
- USB Data Transfer Utility
- User Data and SD Card Encryption
- Lenovo SocialTouch
- PrinterShare™ Mobile Print
- McAfee® Mobile Security
- Google Voice Search
- Google Talk
- Google Maps
- Netflix
- YouTube app
- Adobe® Flash player 10.2
- Slacker Radio
- Amazon MP3
- mSpot Music
- mSpot Movies
- Google Books
- Kindle for Android
- Zinio Magazine Reader
- eBuddy Messenger
- PokeTALK Tablet Version
- ooVoo™ Video Calls
- Angry Birds
- ArcSoft® PowerMobia® Gallery
- ArcSoft PowerMobia eBook Reader and Bookshelf

10W AC Adapter (via micro-USB)
Optional: 65W AC Adapter (via Dock)
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-Tablet sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-Tablet sheet

See footnotes for more detailed information
US model(s) announced August 16, 2011

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ThinkPad® Tablet Accessories

ThinkPad Tablet Expansion

ThinkPad Tablet Dock	0A33953	*ann*	*08/16/11*

Keyboard

ThinkPad Tablet Keyboard Folio Case	0A36370	*ann*	*08/16/11*

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	*ann*	*01/07/10*
Lenovo Mini Speakers M220	55Y2033	*ann*	*01/07/10*
Lenovo Speaker M0520 (black)	57Y6360	*ann*	*02/08/11*
Lenovo Speaker M0520 (red)	57Y6361	*ann*	*02/08/11*

Tablet

ThinkPad Tablet Pen	0A33887	*ann*	*08/16/11*
ThinkPad Tablet Tether (3-pack)	41U4820	*ann*	*11/14/06*

Security

3M 10.1W Privacy Screen Protector (landscape)	0B33486	*ann*	*09/27/11*
3M 10.1W Privacy Screen Protector (portrait)	0B33487	*ann*	*09/27/11*
3M 10.1W Anti-Glare Matte Screen Protector	0B33488	*ann*	*09/27/11*

Power Adapters

ThinkPad Tablet AC Charger	0A36248	*ann*	*08/16/11*
ThinkPad Tablet DC Charger	0A36247	*ann*	*08/16/11*
ThinkPad 65W AC Adapter[66]	40Y7696	*ann*	*01/05/06*

[66] Attachment via the *ThinkPad Tablet Dock 0A33953*.

More info at **www.lenovo.com/support/poweradapters**

Carrying Cases

ThinkPad Tablet Folio Case	0A36405	*ann*	*08/16/11*
ThinkPad Tablet Keyboard Folio Case	0A36370	*ann*	*08/16/11*
ThinkPad 11W Sling Case	57Y4287	*ann*	*08/16/11*

More information at **www.lenovo.com/support/cases**
Lenovo luxury cases at **www.lenovoluxurycases.com**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad® Tablet - TopSeller Services

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:

http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml

TopSeller service upgrade options for ThinkPad Tablet

ThinkPad Tablet with 1-year Depot warranty

3 YEAR Depot Warranty	04W8773
3 YEAR Depot Warranty & ThinkPad Protection	04W8775
3 YEAR Onsite Warranty	04W8774
3 YEAR Onsite Warranty & ThinkPad Protection	04W8776

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ThinkPad® Tablet - ThinkPlus™ Services

Partial list of Lenovo® ThinkPlus Services[22] for ThinkPad Tablet

For more information see: **http://www.lenovo.com/services_warranty/us/en/index.html**

ThinkPlus service upgrade options for ThinkPad Tablet

ThinkPad Tablet with 1-year Depot warranty

1 YEAR Depot Warranty & ThinkPad Protection	04W8309
2 YEAR Depot Warranty	04W8312
2 YEAR Depot Warranty & ThinkPad Protection	04W8313
3 YEAR Depot Warranty	04W8319
3 YEAR Depot Warranty & ThinkPad Protection	04W8320
1 YEAR Onsite Warranty	04W8326
2 YEAR Onsite Warranty	04W8330
3 YEAR Onsite Warranty	04W8337

ThinkPlus Priority Support for enterprise customers

- 24x7 support with priority routing and advanced level technicians

ThinkPad Tablet with 1-year Depot warranty

1 YEAR Depot Warranty & Priority Support*	04W8310
1 YEAR Depot Warranty & ThinkPad Protection & Priority Support*	04W8311
2 YEAR Depot Warranty & Priority Support*	04W8315
2 YEAR Depot Warranty & ThinkPad Protection & Priority Support*	04W8316
3 YEAR Depot Warranty & Priority Support*	04W8322
3 YEAR Depot Warranty & ThinkPad Protection & Priority Support*	04W8323
1 YEAR Onsite Warranty & Priority Support*	04W8328
2 YEAR Onsite Warranty & Priority Support*	04W8333
2 YEAR Onsite Warranty & ThinkPad Protection & Priority Support*	04W8334
3 YEAR Onsite Warranty & Priority Support*	04W8340
3 YEAR Onsite Warranty & ThinkPad Protection & Priority Support*	04W8341

* Covered machine must have concurrent warranty coverage.

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ThinkPad®

Lenovo® ThinkPad L412

Lenovo ThinkPad L412 with
ThinkPad Battery 55++ (9-cell)
57Y4186

Lenovo ThinkPad L412

Lenovo ThinkPad L412

Lenovo ThinkPad L412

Lenovo ThinkPad L412

ThinkPad® L412 4403 (TopSeller) - Windows 7

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Avail date
4403-33U	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	Intel 6200[28]	WWAN upg	None		Blue	Pro 64	May 10
4403-34U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	None	Finger	Blue	Pro 64	May 10
✂ 4403-69U	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg	None		Blue	Pro 64	Jul 10
☞ 4403-75U	i5-480M	2.66	2.93	2GB	14.0" HD	2.0M	320G 7200	11b/g/n	WWAN upg	None			Pro 64	Jan 11

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3 processor i3-350M** or **i3-370M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or **Intel Core i5 processor i5-480M** or **i5-520M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache
Memory	**2GB** std / 8GB max[7] / PC3-10600 1333MHz **DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics:* standard memory in one socket; one socket available
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
SATA disk	**160GB**[8] (7200 rpm) or **320GB** (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, **LED backlight**, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	Camera on top of screen, 2.0-megapixel, fixed focus
Integrated graphics	**Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.92 lb (2.23kg); *6-cell:* from 5.11 lb (2.32kg); *9-cell:* from 5.45 lb (2.47kg)
Case color	black
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion **6-cell**
Battery - life[10]	*4-cell:* up to 2.8 hr; *6-cell:* up to 5.0 hr; *9-cell:* up to 8.1 hr
Chipset	**Mobile Intel HM55 Express Chipset**
ExpressCard/34	One slot (ExpressCard/34)
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
11b/g/n	*Some:* 11b/g/n wireless[4], ThinkPad 11b/g/n, PCIe Half Mini Card
Intel 6200[28]	*Some:* 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
WWAN upg	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 2.1 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Preloaded applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

ThinkPlus™,[22] 1-year LOR[24] 9x5 NBD 45K5968
ThinkPlus 2-year LOR 9x5 NBD 45K5969
ThinkPlus 3-year LOR 9x5 NBD 45K5970
ThinkPlus 4-year LOR 9x5 NBD 45K5973
ThinkPlus 5-year LOR 9x5 NBD 45K5975
ThinkPlus 2-year P&L P/U Depot 45K5971
ThinkPlus 3-year P&L P/U Depot 45K5972
ThinkPlus 4-year P&L P/U Depot 45K5974
ThinkPlus 5-year P&L P/U Depot 45K5976
Post-warranty annual maintenance agreements at **lenovo.com**/thinkplus/warranty

See footnotes for important warranty information

☞ US model announced January 11, 2011; previous models on May 11 or July 6, 2010

✂ US model withdrawn effective June 2011

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ThinkPad® L412 4404 (TopSeller) - Windows 7

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
4404-32U	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 64	May 10
4404-33U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200[28]	WWAN upg		Blue	6	Pro 64	May 10
4404-34U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	May 10
4404-35U	i5-540M	2.53	3.06	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	6	Pro 64	May 10
✂ 4404-4LU	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	Jul 10

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3 processor i3-350M** or **i3-370M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or **Intel Core i5 processor i5-520M** or **i5-540M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache
Memory	**2GB** std / 8GB max[7] / PC3-10600 1333MHz **DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics:* standard memory in one socket; one socket available
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
SATA disk	**160GB**[8] (7200 rpm) or **320GB** (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, **LED backlight**, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	Camera on top of screen, 2.0-megapixel, fixed focus
Integrated graphics	**Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.92 lb (2.23kg); *6-cell:* from 5.11 lb (2.32kg); *9-cell:* from 5.45 lb (2.47kg)
Case color	black
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion **6-cell**
Battery - life[10]	*4-cell:* up to 2.8 hr; *6-cell:* up to 5.0 hr; *9-cell:* up to 8.1 hr
Chipset	**Mobile Intel HM55 Express Chipset**
ExpressCard/34	One slot (ExpressCard/34)
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
11b/g/n	*Some:* 11b/g/n wireless[4], ThinkPad 11b/g/n, PCIe Half Mini Card
Intel 6200[28]	*Some:* 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
WWAN upg	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 2.1 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Preloaded applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

ThinkPlus™,[22] 3-year LOR[24] 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L P/U Depot 45K6023
ThinkPlus 5-year P&L P/U Depot 45K6025
Post-warranty annual maintenance agreements at **lenovo.com**/thinkplus/warranty

See footnotes for important warranty information
US models announced May 11 or July 6, 2010
✂ US model withdrawn effective June 2011

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ThinkPad® L412 0530 (Windows 7)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Avail date
0530-63U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200[28]	Gobi 2000	AT&T[23]	None	Blue	Pro 32	Apr 10
✂ 0530-6LU	i3-370M	2.40		2GB	14.0" HD		160G 7200	Intel 6200			None		Pro 64	Jul 10
☞ 0530-6MU	i5-520M	2.40	2.93	2GB	14.0" HD		160G 7200	Intel 6200	WWAN upg		None		Pro 64	Jul 10

- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3 processor i3-370M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or **Intel Core i5 processor i5-520M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache
Memory	**2GB** std / 8GB max[7] / PC3-10600 1333MHz **DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics:* standard memory in one socket; one socket available
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
SATA disk	**160GB**[8] (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, **LED backlight**, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* camera on top of screen, 2.0-megapixel, fixed focus
Integrated graphics	**Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.92 lb (2.23kg); *6-cell:* from 5.11 lb (2.32kg); *9-cell:* from 5.45 lb (2.47kg)
Case color	black
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion **6-cell**
Battery - life[10]	*4-cell:* up to 2.8 hr; *6-cell:* up to 5.0 hr; *9-cell:* up to 8.1 hr
Chipset	**Mobile Intel HM55 Express Chipset**
ExpressCard/34	One slot (ExpressCard/34)
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
Intel 6200[28]	11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
WWAN upg	*Some:* Wireless WAN upgradable
Gobi™ 2000	*Some:* Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider
Carrier	*Some:* AT&T®, contract required with service provider
Modem	None
Bluetooth™	*Some:* Bluetooth 2.1 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Preloaded applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Adobe® Reader®
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

ThinkPlus™,[22] 1-year LOR[24] 9x5 NBD 45K5968
ThinkPlus 2-year LOR 9x5 NBD 45K5969
ThinkPlus 3-year LOR 9x5 NBD 45K5970
ThinkPlus 4-year LOR 9x5 NBD 45K5973
ThinkPlus 5-year LOR 9x5 NBD 45K5975
ThinkPlus 2-year P&L P/U Depot 45K5971
ThinkPlus 3-year P&L P/U Depot 45K5972
ThinkPlus 4-year P&L P/U Depot 45K5974
ThinkPlus 5-year P&L P/U Depot 45K5976
Post-warranty annual maintenance agreements at **lenovo.com**/thinkplus/warranty

See footnotes for important warranty information

☞ US model announced July 6, 2010; previous models on April 20 or July 6, 2010

✂ US model withdrawn effective June 2011

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ThinkPad® L412 0553 (Windows 7)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Workhorse (W) Preload	Gbl (G) Educ	Avail date
0553-35U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200[28]	Gobi 2000		Finger	Blue	Pro 32		Apr 10
0553-36U	i5-540M	2.53	3.06	4GB	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000		Finger	Blue	Pro 64		Apr 10
0553-42U	i5-520M	2.40	2.93	2GB	14.0" HD		160G 7200	11b/g/n	WWAN upg			Blue	Pro 32	W G	Apr 10
0553-43U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg			Blue	Pro 32	W G	Apr 10
✂ 0553-44U	i5-540M	2.53	3.06	*3GB*	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Finger	Blue	Pro 32	W G	Apr 10
✂ 0553-55U	i5-520M	2.40	2.93	2GB	14.0" HD		250G 5400	Intel 6200	WWAN upg			Blue	Pro 32		Apr 10
0553-56U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000	AT&T[23]	Finger	Blue	Pro 32		Apr 10
✂ 0553-57U	i5-540M	2.53	3.06	*3GB*	14.0" HD	2.0M	160G 7200	Intel 6200	Gobi 2000		Finger	Blue	Pro 32		Apr 10
0553-58U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	11b/g/n	WWAN upg			Blue	Pro 32	Edu	Apr 10
✂ 0553-59U	i5-540M	2.53	3.06	*3GB*	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000	AT&T	Finger	Blue	Pro 32	Edu	Apr 10
0553-6TU	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200	Gobi 2000	AT&T		Blue	Pro 32		Apr 10
✂ 0553-7YU	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Finger	Blue	Pro 64		Jul 10
☞ 0553-7ZU	i5-520M	2.40	2.93	4GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Finger	Blue	Pro 64		Jul 10

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3 processor i3-370M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or **Intel Core i5 processor i5-520M** or **i5-540M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache
Memory	**2GB**, **3GB**, or **4GB** std / 8GB max[7] / PC3-10600 1333MHz **DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italics:* standard memory in both sockets; no sockets available; *Non-italics:* standard memory in one socket; one socket available
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
SATA disk	**160GB**[8] (7200 rpm), **250GB** (5400 rpm), or **320GB** (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, **LED backlight**, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* camera on top of screen, 2.0-megapixel, fixed focus
Integrated graphics	**Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.92 lb (2.23kg); *6-cell:* from 5.11 lb (2.32kg); *9-cell:* from 5.45 lb (2.47kg)
Case color	black
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion **6-cell**
Battery - life[10]	*4-cell:* up to 2.8 hr; *6-cell:* up to 5.0 hr; *9-cell:* up to 8.1 hr
Chipset	**Mobile Intel HM55 Express Chipset**
ExpressCard/34	One slot (ExpressCard/34)
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
11b/g/n	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1
Intel 6200[28]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
WWAN upg	*Some:* Wireless WAN upgradable
Gobi™ 2000	*Some:* Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider
Carrier	*Some:* AT&T®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 2.1 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Preloaded applications[14] (only some listed)
- *Some:* Education software
  - Adobe Digital School Collection
    - Instructor Resources (and DVD)
    - Learning Creative Suite 4 (DVD)
    - Photoshop Elements 7 (DVD)
    - Premiere Elements 7 (and DVD)
    - Acrobat 9 Professional (DVD)
    - Contribute CS4 (and DVD)
    - Soundbooth CS4 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

ThinkPlus™,[22] 3-year LOR[24] 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L P/U Depot 45K6023
ThinkPlus 5-year P&L P/U Depot 45K6025
Post-warranty annual maintenance agreements at **lenovo.com**/thinkplus/warranty

See footnotes for important warranty information

☞ US model announced July 6, 2010; previous models on April 6, April 20, or July 6, 2010

✂ US models withdrawn effective June, August, or October, 2011

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ThinkPad® L412 0585 (Onsite) - Windows 7

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Workhorse (W) Preload	Global (G) GMP (P)	Avail date
0585-42U	i5-520M	2.40	2.93	2GB	14.0" HD		160G 7200	11b/g/n	WWAN upg		Blue	Pro 32	W G P	Apr 10
0585-43U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200[28]	WWAN upg		Blue	Pro 32	W G P	Apr 10
✂ 0585-44U	i5-540M	2.53	3.06	*3GB*	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	Pro 32	W G P	Apr 10

- ***These models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i5 processor i5-520M** or **i5-540M** with **dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache
Memory	**2GB** or **3GB** std / 8GB max[7] / PC3-10600 1333MHz **DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italics:* standard memory in both sockets; no sockets available; *Non-italics:* standard memory in one socket; one socket available
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
SATA disk	**160GB**[8] (7200 rpm) or **320GB** (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, **LED backlight**, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* camera on top of screen, 2.0-megapixel, fixed focus
Integrated graphics	**Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.92 lb (2.23kg); *6-cell:* from 5.11 lb (2.32kg); *9-cell:* from 5.45 lb (2.47kg)
Case color	black
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion **6-cell**
Battery - life[10]	*4-cell:* up to 2.8 hr; *6-cell:* up to 5.0 hr; *9-cell:* up to 8.1 hr
Chipset	**Mobile Intel HM55 Express Chipset**
ExpressCard/34	One slot (ExpressCard/34)
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
11b/g/n	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1
Intel 6200[28]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
WWAN upg	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 2.1 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 32

Preloaded applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

ThinkPlus™,[22] 4-year LOR[24] 9x5 NBD 45K6038
Post-warranty annual maintenance agreements at **lenovo.com**/thinkplus/warranty

See footnotes for important warranty information
US models announced April 20, 2010
✂ US model withdrawn effective October 2011

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ThinkPad® L412 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann 03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann 03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann 03/02/10*

Storage and removable storage

SL410/510 500GB Disk SATA 3G/s (5400 rpm)	43N3422	*ann 10/22/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann 05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann 11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann 01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann 06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:		
ThinkPad Gobi™ 2000 Broadband Option	78Y1399	*ann 01/07/10*
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	*ann 01/07/10*

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	*ann 05/12/09*
USB 2.0 Port Replicator with Digital Video	0A33942	*ann 03/22/11*
ThinkPad Port Replicator Series 3	433610W	*ann 06/23/09*
ThinkPad Mini Dock Series 3 - 90W[61]	433710U	*ann 06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W[62]	433810U	ann 06/23/09

[61] When docked, ThinkPad Mini Dock Series 3 - 90W (433710U) Audio ports are inactive, ThinkPad Audio ports are active.
[62] When docked, ThinkPad Mini Dock Plus Series 3 - 90W (433810U) eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.

Keyboard

TrackPoint Cap Collection	73P2698	*ann 12/16/03*
USB Numeric Keypad	33L3225	*ann 05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann 06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann 03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann 08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann 02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann 03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann 05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann 01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann 12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann 08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann 06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann 01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann 01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann 02/26/08*

Security

Kensington® MicroSaver® Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann 02/21/06*

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	*ann 03/30/10*
ThinkPad Battery 55++ (9-cell)	57Y4186	*ann 03/30/10*
ThinkPad External Battery Charger[44]	40Y7625	*ann 09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[45]	40Y7696	*ann 01/05/06*

[45] Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	*ann 09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann 09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann 09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493		
•iPod and iPhone Charge Tip (L10a)	41R4481	*ann 12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann 01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 14" widescreen models:		
ThinkPad 14W Case Sleeve	57Y4294	*ann 03/16/10*
Up to 15.6" widescreen models:		
ThinkPad 15W Case Sleeve	51J0477	*ann 08/18/09*
Lenovo Messenger Max	41U5253	*ann 05/01/07*
ThinkPad Business Topload Case	43R2476	*ann 05/13/08*
ThinkPad Business Backpack	43R2482	*ann 05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann 05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann 05/13/08*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann 10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann 11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann 10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann 10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann 10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann 10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann 06/10/10*
ThinkVision L2440p Wide 24" Monitor	4420HB2	*ann 09/17/08*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann 05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann 08/04/09*
ThinkVision Soundbar	45K1263	*ann 09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann 09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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Lenovo® ThinkPad L420

Lenovo ThinkPad L420 with
ThinkPad Battery 55++ (9-cell)
57Y4186

Lenovo ThinkPad L420

Lenovo ThinkPad L420

Lenovo ThinkPad L420

Lenovo ThinkPad L420

ThinkPad® L420 7854 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7854-34U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205[28]	WWAN upg	Finger	Blue	***9***	Pro 64
7854-37U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7854-38U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7854-5FU	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64
7854-5GU	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.94 lb (2.24kg); *6-cell:* from 5.14 lb (2.33kg); *9-cell:* from 5.47 lb (2.48kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.9 hr; *6-cell:* up to 7.0 hr; *9-cell:* up to 11.5 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or October 4, 2011

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ThinkPad® L420 7856 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7856-34U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205[28]	WWAN upg	Finger	Blue	***9***	Pro 64
7856-37U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7856-38U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.94 lb (2.24kg); *6-cell:* from 5.14 lb (2.33kg); *9-cell:* from 5.47 lb (2.48kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.9 hr; *6-cell:* up to 7.0 hr; *9-cell:* up to 11.5 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® L420 7827

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G)	Preload
7827-5HU	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 64
✂ 7827-5GU	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 64
✂ 7827-44U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205[28]	WWAN upg	Finger	Blue	6		Pro 64
✂ 7827-43U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
✂ 7827-42U	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 64
✂ 7827-5DU	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 32
✂ 7827-5EU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 32
✂ 7827-5FU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 32
7827-45U	i5-2540M	4GBx1	14.0" HD		500G 7200	TP 11b/g/n	WWAN upg			***9***		Pro 64
7827-46U	i5-2540M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	***9***		Pro 64
✂ 7827-47U	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 32
7827-48U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 32
7827-34U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G	Pro 64
7827-33U	i5-2540M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G	Pro 64
✂ 7827-32U	i5-2520M	2+1GB	14.0" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G	Pro 64
☞ 7827-5WU	i5-2520M	4GBx1	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.94 lb (2.24kg); *6-cell:* from 5.14 lb (2.33kg); *9-cell:* from 5.47 lb (2.48kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.9 hr; *6-cell:* up to 7.0 hr; *9-cell:* up to 11.5 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced April 5, 2011; previous models on February 22, 2011

✂ US models withdrawn effective October 2011

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ThinkPad® L420 7829 (Onsite)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G) GMP (P)	Preload
7829-48U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 64
✂ 7829-47U	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 64
✂ 7829-44U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205[28]	WWAN upg	Finger	Blue	6		Pro 64
✂ 7829-43U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
✂ 7829-42U	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 64
✂ 7829-4QU	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 32
✂ 7829-4RU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 32
✂ 7829-4SU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 32
7829-45U	i5-2540M	4GBx1	14.0" HD		500G 7200	TP 11b/g/n	WWAN upg			***9***		Pro 64
7829-46U	i5-2540M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	***9***		Pro 64
✂ 7829-4TU	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 32
7829-4UU	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 32
7829-34U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G P	Pro 64
7829-33U	i5-2540M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G P	Pro 64
✂ 7829-32U	i5-2520M	2+1GB	14.0" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G P	Pro 64

- ***Some models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
Weight[2]	*4-cell:* from 4.94 lb (2.24kg); *6-cell:* from 5.14 lb (2.33kg); *9-cell:* from 5.47 lb (2.48kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.9 hr; *6-cell:* up to 7.0 hr; *9-cell:* up to 11.5 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011
✂ US models withdrawn effective October 2011

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ThinkPad® L420 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann 03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann 03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann 03/02/10*

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	*ann 05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann 11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann 01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann 06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:		
ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann 04/12/11*

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	*ann 05/12/09*
ThinkPad Port Replicator Series 3	433610W	*ann 06/23/09*
ThinkPad Mini Dock Series 3 - 90W	433710U	*ann 06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann 06/23/09

Keyboard

TrackPoint Cap Collection	73P2698	*ann 12/16/03*
USB Numeric Keypad	33L3225	*ann 05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann 06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann 03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann 08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann 02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann 03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann 05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann 01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann 12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann 08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann 06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann 01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann 01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann 02/26/08*

Security

3M 14.0W Privacy Filter from Lenovo	0A61769	*ann 04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann 02/21/06*
ExpressCard Gemplus Smart Card Reader[57]	41N3043	*ann 06/27/06*

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	*ann 03/30/10*
ThinkPad Battery 55++ (9-cell)	57Y4186	*ann 03/30/10*
ThinkPad External Battery Charger[44]	40Y7625	*ann 09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[45]	40Y7696	*ann 01/05/06*

[45] Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	*ann 09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann 09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann 09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

•iPod and iPhone Charge Tip (L10a)	41R4481	*ann 12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann 01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 14" widescreen models:		
ThinkPad 14W Case Sleeve	57Y4294	*ann 03/16/10*
Up to 15.6" widescreen models:		
ThinkPad 15W Case Sleeve	51J0477	*ann 08/18/09*
Lenovo Messenger Max	41U5253	*ann 05/01/07*
Lenovo Performance BackPack	41U5254	*ann 05/01/07*
ThinkPad Business Topload Case	43R2476	*ann 05/13/08*
ThinkPad Business Backpack	43R2482	*ann 05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann 05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann 05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann 01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann 01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann 01/07/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann 10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann 11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann 10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann 10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann 10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann 10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann 06/10/10*
ThinkVision L2440p Wide 24" Monitor	4420HB2	*ann 09/17/08*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann 05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann 08/04/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann 08/05/08*
ThinkVision Soundbar	45K1263	*ann 09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann 09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad®

Lenovo® ThinkPad L520

Lenovo ThinkPad L520 with
ThinkPad Battery 55++ (9-cell)
57Y4186

Lenovo ThinkPad L520

Lenovo ThinkPad L520

Lenovo ThinkPad L520

Lenovo ThinkPad L520

ThinkPad® L520 7859 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7859-35U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-36U	i5-2410M	4GBx1	15.6" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-38U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-68U	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64
7859-69U	i5-2430M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (395mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio *Some:* **15.6"** (395mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*15.6W" (WxDxH):* 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm
Weight[2]	*4-cell:* from 5.54 lb (2.51kg); *6-cell:* from 5.75 lb (2.61kg); *9-cell:* from 6.07 lb (2.75kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.6 hr; *6-cell:* up to 6.6 hr; *9-cell:* up to 10.8 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or October 4, 2011

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ThinkPad® L520 7860 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7860-35U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7860-36U	i5-2410M	4GBx1	15.6" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7860-38U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (395mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio *Some:* **15.6"** (395mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*15.6W" (WxDxH):* 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm
Weight[2]	*4-cell:* from 5.54 lb (2.51kg); *6-cell:* from 5.75 lb (2.61kg); *9-cell:* from 6.07 lb (2.75kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.6 hr; *6-cell:* up to 6.6 hr; *9-cell:* up to 10.8 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® L520 5016

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G)	Preload
✂ 5016-43U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205[28]	WWAN upg			***9***		Pro 64
5016-46U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205	WWAN upg			***9***		Pro 64
✂ 5016-42U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205	WWAN upg			***9***		Pro 32
5016-44U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	***9***		Pro 64
5016-45U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205	WWAN upg			***9***		Pro 32
5016-47U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Finger	Blue	***9***		Pro 64
✂ 5016-48U	i5-2520M	2+1GB	15.6" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
✂ 5016-49U	i5-2520M	2+1GB	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 64
5016-33U	i5-2540M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G	Pro 64
✂ 5016-32U	i5-2520M	2+1GB	15.6" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G	Pro 64
☞ 5016-5ZU	i5-2540M	4GBx1	15.6" HD+		320G 7200	Intel 6205	WWAN upg			***9***		Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (395mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio *Some:* **15.6"** (395mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*15.6W" (WxDxH):* 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm
Weight[2]	*4-cell:* from 5.54 lb (2.51kg); *6-cell:* from 5.75 lb (2.61kg); *9-cell:* from 6.07 lb (2.75kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.6 hr; *6-cell:* up to 6.6 hr; *9-cell:* up to 10.8 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L520 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced April 5, 2011; previous models on February 22, 2011

✂ US models withdrawn effective October 2011

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ThinkPad® L520 5017 (Onsite)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G) GMP (P)	Preload
5017-46U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205[28]	WWAN upg			9		Pro 64
✂ 5017-43U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205	WWAN upg			9		Pro 64
✂ 5017-42U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205	WWAN upg			9		Pro 32
5017-44U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	9		Pro 64
5017-45U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205	WWAN upg			9		Pro 32
5017-47U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Finger	Blue	9		Pro 64
✂ 5017-48U	i5-2520M	2+1GB	15.6" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
✂ 5017-49U	i5-2520M	2+1GB	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 64
5017-33U	i5-2540M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G P	Pro 64
✂ 5017-32U	i5-2520M	2+1GB	15.6" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G P	Pro 64

- ***Some models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mainstream business performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (395mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio *Some:* **15.6"** (395mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Integrated graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	None
Dimensions[3]	*15.6W" (WxDxH):* 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm
Weight[2]	*4-cell:* from 5.54 lb (2.51kg); *6-cell:* from 5.75 lb (2.61kg); *9-cell:* from 6.07 lb (2.75kg)
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell
Battery - life[10]	*4-cell:* up to 3.6 hr; *6-cell:* up to 6.6 hr; *9-cell:* up to 10.8 hr
Chipset	**Mobile Intel HM65 Express Chipset**
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor[11] (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Realtek® RTL8111DL Gigabit Network Connection
Intel AMT	None
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-L520 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011
✂ US models withdrawn effective October 2011

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ThinkPad® L520 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann 03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann 03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann 03/02/10*

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	*ann 05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann 11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann 01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann 06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:		
ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann 04/12/11*

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	*ann 05/12/09*
ThinkPad Port Replicator Series 3	433610W	*ann 06/23/09*
ThinkPad Mini Dock Series 3 - 90W	433710U	*ann 06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann 06/23/09

Keyboard

TrackPoint Cap Collection	73P2698	*ann 12/16/03*
USB Numeric Keypad	33L3225	*ann 05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann 06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann 03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann 08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann 02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann 03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann 05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann 01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann 12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann 08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann 06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann 01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann 01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann 02/26/08*

Security

3M 15.6W Privacy Filter from Lenovo	0A61771	*ann 04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann 02/21/06*
ExpressCard Gemplus Smart Card Reader[57]	41N3043	*ann 06/27/06*

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	*ann 03/30/10*
ThinkPad Battery 55++ (9-cell)	57Y4186	*ann 03/30/10*
ThinkPad External Battery Charger[44]	40Y7625	*ann 09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[45]	40Y7696	*ann 01/05/06*

[45] Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	*ann 09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann 09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann 09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

•iPod and iPhone Charge Tip (L10a)	41R4481	*ann 12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann 01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 15.6" widescreen models:		
ThinkPad 15W Case Sleeve	51J0477	*ann 08/18/09*
Lenovo Messenger Max	41U5253	*ann 05/01/07*
Lenovo Performance BackPack	41U5254	*ann 05/01/07*
ThinkPad Business Topload Case	43R2476	*ann 05/13/08*
ThinkPad Business Backpack	43R2482	*ann 05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann 01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann 01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann 01/07/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann 10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann 11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann 10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann 10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann 10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann 10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann 06/10/10*
ThinkVision L2440p Wide 24" Monitor	4420HB2	*ann 09/17/08*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann 05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann 08/04/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann 08/05/08*
ThinkVision Soundbar	45K1263	*ann 09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann 09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad®

Lenovo® ThinkPad T420

Lenovo ThinkPad T420

Lenovo ThinkPad T420

Lenovo ThinkPad T420

ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology

ThinkPad Mini Dock Series 3 - 90W
433710U

ThinkPad® T420 4177 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload
4177-Q8U	i5-2520M	4GBx1	14.0" HD+	720p	160G SSD	Intel 6300[28]	upg	None	1394	Smart	Finger	Blue	6	iAMT	vPro	Pro 64
4177-Q5U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205[28]	upg	None					6	iAMT	vPro	Pro 64
4177-Q2U	i5-2540M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	upg	None			Finger	Blue	6	iAMT	vPro	Pro 64
4177-QKU	i5-2410M	4GBx1	14.0" HD+	720p	320G 7200	Intel 1000	upg	None					6			Pro 64
4177-QJU	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	upg	None				Blue	6			Prem 64
4177-QLU	i5-2540M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	upg	None					6			Pro 64
4177-R3U	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	upg	None				Blue	6			Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5mm x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	*Some:* Smart Card reader
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	*Some:* IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Home Premium 64
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22, April 5, May 3, or October 4, 2011

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ThinkPad® T420 4178 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Modem	IEEE 1394	Finger print reader	Bat-tery cells	Intel AMT	Intel vPro	Preload
4178-6UU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205[28]	WWAN upg		None	1394	Finger	6	iAMT	vPro	Pro 64
4178-9RU	i5-2410M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg		None			6			Pro 64
4178-59U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg		None			6	iAMT	vPro	Pro 64
4178-57U	i5-2540M	2GBx2	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg		None			6	iAMT	vPro	Pro 64
4178-56U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg		None			6	iAMT	vPro	Pro 64
4178-AFU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	WWAN upg		None	1394	Finger	6			Pro 64
4178-ACU	i5-2520M	4GBx1	14.0" HD		320G 7200	Intel 1000	WWAN upg		None			6			Pro 32
4178-APU	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	Gobi 3000	selectable	None		Finger	6	iAMT	vPro	Pro 64
☞ 4178-AWU	i7-2620M	4GBx1	14.0" HD	720p	160G SSD	Intel 6205	WWAN upg		None	1394	Finger	6	iAMT	vPro	Pro 64
☞ 4178-ATU	i5-2540M	4GBx1	14.0" HD	720p	128G SSD	Intel 6205	WWAN upg		None	1394	Finger	6	iAMT	vPro	Pro 64

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	None
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
IEEE 1394	*Some:* IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced May 31, 2011; previous models on February 22, April 5, or May 3, 2011

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ThinkPad® T420 4178 (TopSeller) - October 2011

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4178-B7U	i5-2430M	4GBx1	14.0" HD	720p	128G SSD	Intel 1000	WWAN upg	None		Finger	Blue	6	No	Pro 64
4178-C9U	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	WWAN upg	None	1394	Finger	Blue	6	No	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	None
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	*Some:* IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced October 4 or October 11, 2011

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ThinkPad® T420 4178 (Optimus) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4178-6WU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	None	1394	Finger	Blue	***9***	vPro	Pro 64
4178-6VU	i5-2520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	***9***	vPro	Pro 64
4178-58U	i5-2520M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	None			Blue	***9***	vPro	Pro 64
4178-CAU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	***9***	vPro	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.65 lb (2.11kg); *6-cell:* from 4.84 lb (2.20kg); *9-cell:* from 5.22 lb (2.37kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	None
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
PCIe Mini Card WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	*Some:* IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or October 11, 2011

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ThinkPad® T420 4180

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WWAN/mSATA	Carrier	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Global (G) Educ	Preload
4180-MNU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	WWAN upg			1394		Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-MBU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	WWAN upg		Modem			Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-63U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	WWAN upg			1394		Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-62U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	WWAN upg			1394			Blue	6	iAMT	vPro	G	Pro 64
4180-KHU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	WWAN upg		Modem			Fing	Blue	6	iAMT	vPro		Pro 64
4180-NDU	i5-2540M	4GBx1	14.0" HD		320G 7200	WWAN upg			1394	Smart			6	iAMT	vPro		Pro 64
4180-NCU	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	WWAN upg		Modem					6			Edu	Prem 64
4180-N2U	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	WWAN upg		Modem		Smart	Fing	Blue	6	iAMT	vPro		Pro 64
4180-PAU	i5-2520M	4GBx1	14.0" HD	720p	128G SSD	WWAN upg					Fing	Blue	6	iAMT	vPro	G	Pro 64
☞ 4180-PFU	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Gobi 3000	selectable				Fing	Blue	6	iAMT	vPro		Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	*Some:* Smart Card reader
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	*Some:* 56K V.92[6] modem
IEEE 1394	*Some:* IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Home Premium 64
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced May 3, 2011; previous models on February 22, March 1, or April 5, 2011

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ThinkPad® T420 4180 (November 2011)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4180-Q3U	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	Modem	None	Smart	Finger	Blue	6	vPro	Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	Smart Card reader
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
IEEE 1394	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced November 1, 2011

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ThinkPad® T420 4180 (Optimus)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4180-MMU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	1394		Finger	Blue	***9***	vPro	G	Pro 64
4180-65U	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	1394		Finger	Blue	***9***	vPro	G	Pro 64
4180-64U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	1394			Blue	6	vPro	G	Pro 64
4180-NEU	i5-2540M	4GBx1	14.0" HD		320G 7200	Intel 6205	WWAN upg	1394	Smart			6	vPro		Pro 64
4180-PRU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	1394		Finger	Blue	***9***	vPro		Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.65 lb (2.11kg); *6-cell:* from 4.84 lb (2.20kg); *9-cell:* from 5.22 lb (2.37kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	*Some:* Smart Card reader
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or November 1, 2011

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ThinkPad® T420 4236 (Onsite)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Preload
4236-NUU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205[28]	WWAN upg		1394	Finger	Blue	6	vPro	G P	Pro 64
4236-MBU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	6	vPro	G P	Pro 64
✂ 4236-NHU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	6	vPro	G P	Pro 64
4236-63U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg		1394	Finger	Blue	6	vPro	G P	Pro 64
4236-62U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg		1394		Blue	6	vPro	G P	Pro 64
☞ 4236-PAU	i5-2520M	4GBx1	14.0" HD	720p	128G SSD	Intel 6205	WWAN upg			Finger	Blue	6	vPro	G P	Pro 64

- ***These models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	None
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	*Some:* 56K V.92[6] modem
IEEE 1394	*Some:* IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced April 5, 2011; previous models on February 22, 2011

✂ US model withdrawn effective March 2011

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ThinkPad® T420 4236 (Optimus) - Onsite

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Preload
4236-NVU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	None	1394	Finger	Blue	***9***	vPro	G P	Pro 64
4236-65U	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394		Blue	***9***	vPro	G P	Pro 64
4236-64U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	1394		Blue	6	vPro	G P	Pro 64
4236-PRU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	***9***	vPro	G	Pro 64

- ***Some models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* **14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.65 lb (2.11kg); *6-cell:* from 4.84 lb (2.20kg); *9-cell:* from 5.22 lb (2.37kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	None
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or November 1, 2011

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ThinkPad® T420i 4177 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4177-QGU	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	None		6	None	Pro 64
4177-R2U	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	None	Blue	6	None	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD (1366x768) color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm
Weight[2]	*4-cell:* from 4.60 lb (2.09kg); *6-cell:* from 4.79 lb (2.17kg); *9-cell:* from 5.17 lb (2.35kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Carbon-Fiber Reinforced Plastic
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
Battery - life[10]	*6-cell:* up to 9.0 hr; *9-cell:* up to 15.0 hr; *9-cell plus Slice battery:* up to 30.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card read	None
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
IEEE 1394	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced March 1 or October 4, 2011

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ThinkPad® T420 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann*	*03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann*	*03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann*	*03/02/10*

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	*ann*	*06/23/09*
DVD Burner Ultrabay Enhanced II SATA	43N3294	*ann*	*01/07/10*

Storage and removable storage

256GB 1.8" FDE Solid State Drive[41]	43N3417	*ann*	*06/23/09*
160GB 2.5" Intel Solid State Drive II[41]	0A33983	*ann*	*02/22/11*
128GB 2.5" Solid State Drive II[41]	0A33984	*ann*	*02/22/11*
250GB 7200rpm SATA 3.0G/s OPAL-capable FDE HDD II[41]	0A33985	*ann*	*02/22/11*
320GB 7200rpm SATA 3.0Gb/s Hard Drive II[41]	0A33986	*ann*	*02/22/11*
320GB 5400rpm SATA 3.0Gb/s Hard Drive II[41]	0A33987	*ann*	*02/22/11*

[41] Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann*	*03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann*	*05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann*	*11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann*	*01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann*	*06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:			
ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann*	*04/12/11*

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	*ann*	*05/12/09*
ThinkPad Port Replicator Series 3	433610W	*ann*	*06/23/09*
ThinkPad Mini Dock Series 3 - 90W	433710U	*ann*	*06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	*ann*	*06/23/09*
ThinkPad Mini Dock Plus Series 3 - 170W	433830U	*ann*	*02/22/11*

Keyboard

TrackPoint Cap Collection	73P2698	*ann*	*12/16/03*
USB Numeric Keypad	33L3225	*ann*	*05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann*	*06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann*	*03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann*	*08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann*	*02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann*	*03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann*	*05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann*	*01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann*	*12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann*	*08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann*	*06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann*	*01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann*	*01/07/10*

Security

3M 14.0W Privacy Filter from Lenovo	0A61769	*ann*	*04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann*	*02/21/06*

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	*ann*	*03/30/10*
ThinkPad Battery 55++ (9-cell)	57Y4186	*ann*	*03/30/10*
ThinkPad Battery 27++ (9-cell, slice)[43]	57Y4545	*ann*	*01/07/10*

[43] To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger[44]	40Y7625	*ann*	*09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[45]	40Y7696	*ann*	*01/05/06*

[45] Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	*ann*	*09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann*	*09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann*	*09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493			
•iPod and iPhone Charge Tip (L10a)	41R4481	*ann*	*12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann*	*01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 14" widescreen models:			
ThinkPad 14W Case Sleeve	57Y4294	*ann*	*03/16/10*
Up to 15.6" widescreen models:			
ThinkPad 15W Case Sleeve	51J0477	*ann*	*08/18/09*
Lenovo Messenger Max	41U5253	*ann*	*05/01/07*
Lenovo Performance BackPack	41U5254	*ann*	*05/01/07*
ThinkPad Business Topload Case	43R2476	*ann*	*05/13/08*
ThinkPad Business Backpack	43R2482	*ann*	*05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann*	*05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann*	*05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann*	*01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann*	*01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann*	*01/07/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann*	*10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann*	*11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann*	*10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann*	*10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann*	*10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann*	*10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann*	*06/10/10*

More information at **www.lenovo.com/support/monitors**
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories[46]

DisplayPort to Single-link DVI-D Cable	45J7915	*ann*	*08/05/08*
ThinkVision Soundbar	45K1263	*ann*	*09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann*	*09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad®

Lenovo® ThinkPad T420s

Lenovo ThinkPad T420s

ThinkPad Battery 42 (3-cell, bay)
57Y4536

ThinkPad Battery 66+ (6-cell)
0A36287

ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology

Lenovo ThinkPad T420s

ThinkPad® T420s 4170 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload
4170-33U	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205[28]	WWAN upg			Blue	iAMT	vPro	Pro 64
4170-32U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	TP 11b/g/n	WWAN upg			Blue			Pro 64
4170-27U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg				iAMT	vPro	Pro 64
☞ 4170-3DU	i5-2540M	2GBx2	14.0" HD+	720p	160G SSD	DVD±RW	Intel 6205	WWAN upg	Smart		Blue	iAMT		Pro 32
☞ 4170-3BU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	Bay battery	Intel 6205	WWAN upg		Finger	Blue	iAMT	vPro	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	*Some:* ThinkPad Battery 42 (3-cell, bay) (57Y4536) in Option Bay
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343mm x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced May 3, 2011; previous models on February 22, 2011

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ThinkPad® T420s 4171 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload
4171-53U	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205[28]	WWAN upg			Blue	iAMT	vPro	Pro 64
4171-52U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg			Blue	iAMT	vPro	Pro 64
4171-6WU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205	Gobi 3000	selectable	Finger	Blue	iAMT	vPro	Pro 64
4171-6ZU	i5-2540M	4GBx1	14.0" HD+	720p	160G SSD	Intel 6205	WWAN upg		Finger	Blue	iAMT	vPro	Pro 64
☞ 4171-74U	i5-2520M	4GBx1	14.0" HD+	720p	160G SSD	Intel 1000	WWAN upg		Finger	Blue			Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	None
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced August 2, 2011; previous models on February 22, May 3, or May 31, 2011

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ThinkPad® T420s 4171 (Optimus) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Preload
4171-6JU	i7-2620M	4GBx1	14.0" HD+	720p	160G SSD	DVD±RW	Intel 6205[28]	WWAN upg	None	Finger	Blue	vPro	Pro 64
4171-7FU	i7-2640M	4GBx1	14.0" HD+	720p	160G SSD	DVD±RW	Intel 6205	WWAN upg	None	Finger	Blue	vPro	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	None
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced May 31 or October 11, 2011

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Smart Card Reader	Finger print reader	Blue-tooth	Global (G) Intel vPro	GMP (P)	Pre-load
4173-KUU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Bay battery	Intel 6205[28]	WWAN upg				Blue	vPro		Pro 64
4173-KTU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg				Blue	vPro		Pro 64
4173-KSU	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg				Blue	vPro		Pro 64
4173-29U	i5-2520M	4GBx1	14.0" HD+		320G 7200	DVD±RW	Intel 6205	WWAN upg			Fing	Blue	vPro	G	Pro 64
4173-2AU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg				Blue	vPro	G	Pro 64
4173-2BU	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg				Blue	vPro	G	Pro 64
4173-L5U	i5-2520M	4GBx1	14.0" HD+		320G 7200	DVD±RW	Intel 6205	WWAN upg		Smart			vPro		Pro 64
4173-L6U	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg			Fing	Blue	vPro		Pro 64
☞ 4173-LBU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	Gobi 3000	selectable		Fing	Blue	vPro		Pro 64
☞ 4173-L8U	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg			Fing	Blue	vPro	G	Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	*Some:* ThinkPad Battery 42 (3-cell, bay) (57Y4536) in Option Bay
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced May 3, 2011; previous models on February 22, March 1, or April 5, 2011

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ThinkPad® T420s 4173 (Optimus)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Pre-load
4173-28U	i7-2620M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205[28]	WWAN upg	None	None	Blue	vPro	G	Pro 64
4173-LUU	i7-2640M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg	None	None	Blue	vPro	G	Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	None
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced March 15 or November 1, 2011

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ThinkPad® T420s 4174 (Onsite)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload
4174-29U	i5-2520M	4GBx1	14.0" HD+		320G 7200	DVD±RW	Intel 6205[28]	WWAN upg	Finger	Blue	vPro	G P	Pro 64
4174-2AU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg		Blue	vPro	G P	Pro 64
4174-2BU	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg		Blue	vPro	G P	Pro 64
☞ 4174-L8U	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg	Finger	Blue	vPro	G P	Pro 64

- ***These models have a limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	None
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced May 3, 2011; previous models on February 22, 2011

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ThinkPad® T420s 4174 (Optimus) - Onsite

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload
4174-28U	i7-2620M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205[28]	WWAN upg	None	Blue	vPro	G P	Pro 64
4174-PPU	i7-2640M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg	None	Blue	vPro	G	Pro 64

- ***Some models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance and ultraportability; two spindles*
Processor	**Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 9.5mm Ultrabay slim, removable
Bay battery	None
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.0W" (WxDxH):* 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
Weight[2]	*6-cell:* starting at 3.68 lb (1.67kg)
Case material	*Display cover:* Hybrid Carbon-fiber reinforced plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
Battery - life[10]	*6-cell:* up to 5.5 hr; *6-cell plus Ultrabay battery:* up to 9.3 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T420-S sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced March 15 or November 1, 2011

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ThinkPad® T420s Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann 03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann 03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann 03/02/10*

Ultrabay Slim 9.5mm

Serial ATA Hard Drive Bay Adapter III	43N3412	*ann 06/23/09*
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	*ann 08/03/10*
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	*ann 06/23/09*

Storage and removable storage

160GB 2.5" Intel Solid State Drive II[41]	0A33983	*ann 02/22/11*
128GB 2.5" Solid State Drive II[41]	0A33984	*ann 02/22/11*
250GB 7200rpm SATA 3.0G/s OPAL-capable FDE HDD II[41]	0A33985	*ann 02/22/11*
320GB 7200rpm SATA 3.0Gb/s Hard Drive II[41]	0A33986	*ann 02/22/11*
320GB 5400rpm SATA 3.0Gb/s Hard Drive II[41]	0A33987	*ann 02/22/11*

[41] Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann 03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann 05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann 11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann 01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann 06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:		
ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann 04/12/11*

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	*ann 05/12/09*
ThinkPad Port Replicator Series 3	433610W	*ann 06/23/09*
ThinkPad Mini Dock Series 3 - 90W	433710U	*ann 06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	*ann 06/23/09*
ThinkPad Mini Dock Plus Series 3 - 170W	433830U	*ann 02/22/11*

Keyboard

TrackPoint Cap Collection	73P2698	*ann 12/16/03*
USB Numeric Keypad	33L3225	*ann 05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann 06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann 03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann 08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann 02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann 03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann 05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann 01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann 12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann 08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann 06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann 01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann 01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann 02/26/08*

Security

3M 14.0W Privacy Filter from Lenovo	0A61769	*ann 04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann 02/21/06*

Batteries

ThinkPad Battery 66+ (6-cell)	0A36287	*ann 02/22/11*
ThinkPad Battery 42 (3-cell, bay)[42]	57Y4536	*ann 08/25/09*

[42] Used in Ultrabay Slim bay.

ThinkPad External Battery Charger[44]	40Y7625	*ann 09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[45]	40Y7696	*ann 01/05/06*

[45] Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	*ann 09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann 09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann 09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493		
•iPod and iPhone Charge Tip (L10a)	41R4481	*ann 12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann 01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 14" widescreen models:		
ThinkPad 14W Case Sleeve	57Y4294	*ann 03/16/10*
Up to 15.6" widescreen models:		
ThinkPad 15W Case Sleeve	51J0477	*ann 08/18/09*
Lenovo Messenger Max	41U5253	*ann 05/01/07*
Lenovo Performance BackPack	41U5254	*ann 05/01/07*
ThinkPad Business Topload Case	43R2476	*ann 05/13/08*
ThinkPad Business Backpack	43R2482	*ann 05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann 05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann 05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann 01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann 01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann 01/07/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann 10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann 11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann 10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann 10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann 10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann 10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann 06/10/10*

More information at **www.lenovo.com/support/monitors**
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann 05/12/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann 08/05/08*
ThinkVision Soundbar	45K1263	*ann 09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann 09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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Lenovo® ThinkPad T520

Lenovo ThinkPad T520

ThinkPad Mini Dock Plus Series 3 - 90W
433810U

ThinkPad Battery 27++ (9-cell, slice)
57Y4545

ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology

Lenovo ThinkPad T520

ThinkPad® T520 4239 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Modem	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Global (G) Educ	Preload
4239-46U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205[28]	WWAN upg	None		None	Blue	6	iAMT	vPro		Pro 64
4239-4CU	i5-2410M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Smart	None		6			Edu	Prem 64
4239-4DU	i5-2410M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None		None	Blue	6				Prem 64
4239-4EU	i5-2540M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None		None	Blue	6				Pro 32
4239-4MU	i5-2430M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None		None	Blue	6				Pro 64

- ***Small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.54 lb (2.51kg); *9-cell:* starting at 5.89 lb (2.67kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 7.7 hr; *9-cell:* up to 12.8 hr; *9-cell plus slice battery:* up to 25.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Home Premium 64
- *Some:* Genuine Windows 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22, March 1, April 5, June 21, or October 4, 2011

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ThinkPad® T520 4240 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload
4240-4AU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205[28]	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
4240-2GU	i5-2540M	2GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None		Blue	6	iAMT	vPro	Pro 64
4240-2FU	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None			6	iAMT	vPro	Pro 64
4240-4EU	i7-2620M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
4240-4RU	i5-2520M	4GBx1	15.6" HD		320G 7200	Intel 1000	WWAN upg	None		Blue	6			Pro 32
4240-53U	i5-2540M	4GBx1	15.6" HD	720p	128G SSD	Intel 6205	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
4240-66U	i7-2640M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.54 lb (2.51kg); *9-cell:* starting at 5.89 lb (2.67kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 7.7 hr; *9-cell:* up to 12.8 hr; *9-cell plus slice battery:* up to 25.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Professional 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22, March 1, April 5, May 31, or October 11, 2011

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ThinkPad® T520 4239 (Optimus) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4239-26U	i7-2620M	4GBx2	15.6" FHD	720p	128G SSD	Intel 6300[28]	WWAN upg	None	Finger	Blue	***9***	vPro	Pro 64
4239-23U	i5-2540M	2GBx2	15.6" HD+	720p	320G 7200	Intel 6205[28]	WWAN upg	None	Finger	Blue	***9***	vPro	Pro 64
4239-24U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	***9***	vPro	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.67 lb (2.57kg); *9-cell:* starting at 6.02 lb (2.73kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 8.4 hr; *9-cell:* up to 14.0 hr; *9-cell plus slice battery:* up to 28.1 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® T520 4240 (Optimus) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Power Adapter (watt)	Intel AMT	Intel vPro	Preload
4240-48U	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	None	Finger	Blue	***9***	90W	iAMT	vPro	Pro 64
4240-49U	i5-2520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	***9***	90W	iAMT	vPro	Pro 64
4240-2HU	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None		Blue	***9***	90W	iAMT	vPro	Pro 64
☞ 4240-57U	i7-2630QM	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	***9***	135W			Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.67 lb (2.57kg); *9-cell:* starting at 6.02 lb (2.73kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 8.4 hr; *9-cell:* up to 14.0 hr; *9-cell plus slice battery:* up to 28.1 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt or 135-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced May 31, 2011; previous models on February 22, 2011

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ThinkPad® T520 4241

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4241-26U	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205[28]	WWAN upg	None	Finger	Blue	6	vPro	Pro 64

- ***This system is Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.54 lb (2.51kg); *9-cell:* starting at 5.89 lb (2.67kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 7.7 hr; *9-cell:* up to 12.8 hr; *9-cell plus slice battery:* up to 25.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model announced February 22, 2011

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ThinkPad® T520 4242

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4242-4WU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205[28]	WWAN upg	Modem		Finger	Blue	6	vPro	G	Pro 64
4242-39U	i5-2540M	2GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg				Blue	6	vPro		Pro 64
4242-29U	i5-2520M	2GBx2	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg				Blue	6	vPro	G	Pro 64
☞ 4242-58U	i5-2540M	4GBx1	15.6" HD		320G 7200	Intel 6205	WWAN upg	Modem	Smart			***9***	vPro		Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.54 lb (2.51kg); *9-cell:* starting at 5.89 lb (2.67kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 7.7 hr; *9-cell:* up to 12.8 hr; *9-cell plus slice battery:* up to 25.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	*Some:* 56K V.92[6] modem
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced April 5, 2011; previous models on February 22, 2011

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ThinkPad® T520 4242 (Optimus)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4242-4UU	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	Modem		Finger	Blue	***9***	vPro	G	Pro 64
4242-4VU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	***9***	vPro	G	Pro 64
4242-27U	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg					***9***	vPro	G	Pro 64
4242-28U	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Finger	Blue	***9***	vPro	G	Pro 64
4242-59U	i5-2540M	4GBx1	15.6" HD		320G 7200	Intel 6205	WWAN upg	Modem	Smart			***9***	vPro		Pro 64
4242-5UU	i7-2640M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	***9***	vPro	G	Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.67 lb (2.57kg); *9-cell:* starting at 6.02 lb (2.73kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 8.4 hr; *9-cell:* up to 14.0 hr; *9-cell plus slice battery:* up to 28.1 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	*Some:* 56K V.92[6] modem
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22, April 5, or October 11, 2011

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ThinkPad® T520 4243 (Onsite)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4243-4WU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205[28]	WWAN upg	Modem	Finger	Blue	6	vPro	G P	Pro 64
4243-29U	i5-2520M	2GBx2	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg			Blue	6	vPro	G P	Pro 64

- ***These models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.54 lb (2.51kg); *9-cell:* starting at 5.89 lb (2.67kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 7.7 hr; *9-cell:* up to 12.8 hr; *9-cell plus slice battery:* up to 25.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	*Some:* 56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® T520 4243 (Optimus) - Onsite

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4243-4UU	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205[28]	WWAN upg	Modem	Finger	Blue	***9***	vPro	G P	Pro 64
4243-4VU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	***9***	vPro	G P	Pro 64
4243-28U	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Blue	***9***	vPro	G P	Pro 64
4243-27U	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg				***9***	vPro	G P	Pro 64
4243-5UU	i7-2640M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	***9***	vPro	G P	Pro 64

- ***Part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA NVS™ 4200M**, PCI Express® x16, **1GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.67 lb (2.57kg); *9-cell:* starting at 6.02 lb (2.73kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 8.4 hr; *9-cell:* up to 14.0 hr; *9-cell plus slice battery:* up to 28.1 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	*Some:* 56K V.92[6] modem
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or October 11, 2011

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ThinkPad® T520i 4239 (TopSeller)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4239-47U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None		6	None	Pro 64
4239-4LU	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	Blue	6	None	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere performance; two spindles*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.54 lb (2.51kg); *9-cell:* starting at 5.89 lb (2.67kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 7.7 hr; *9-cell:* up to 12.8 hr; *9-cell plus slice battery:* up to 25.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	*Integrated model:* Four USB 2.0 (one powered), *Optimus model:* Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-T520 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced March 1 or October 4, 2011

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ThinkPad® T520 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann*	*03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann*	*03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann*	*03/02/10*

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	*ann*	*06/23/09*
DVD Burner Ultrabay Enhanced II SATA	43N3294	*ann*	*01/07/10*

Storage and removable storage

256GB 1.8" FDE Solid State Drive[41]	43N3417	*ann*	*06/23/09*
160GB 2.5" Intel Solid State Drive II[41]	0A33983	*ann*	*02/22/11*
128GB 2.5" Solid State Drive II[41]	0A33984	*ann*	*02/22/11*
250GB 7200rpm SATA 3.0G/s OPAL-capable FDE HDD II[41]	0A33985	*ann*	*02/22/11*
320GB 7200rpm SATA 3.0Gb/s Hard Drive II[41]	0A33986	*ann*	*02/22/11*
320GB 5400rpm SATA 3.0Gb/s Hard Drive II[41]	0A33987	*ann*	*02/22/11*

[41] Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann*	*03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann*	*05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann*	*11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann*	*01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann*	*06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann*	*04/12/11*

ThinkPad Expansion

ThinkPad Port Replicator Series 3[62]	433610W	*ann*	*06/23/09*
ThinkPad Mini Dock Series 3 - 90W[62]	433710U	*ann*	*06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W[62]	433810U	*ann*	*06/23/09*
ThinkPad Mini Dock Plus Series 3 - 170W	433830U	*ann*	*02/22/11*
Lenovo® Essential Notebook Stand	45J9292	*ann*	*05/12/09*

[62] Compatible only with dual core models.

Keyboard

TrackPoint Cap Collection	73P2698	*ann*	*12/16/03*
USB Numeric Keypad	33L3225	*ann*	*05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann*	*06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann*	*03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann*	*08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann*	*02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann*	*03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann*	*05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann*	*01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann*	*12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann*	*08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann*	*06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann*	*01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann*	*01/07/10*

Security

3M 15.6W Privacy Filter from Lenovo	0A61771	*ann*	*04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann*	*02/21/06*

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	*ann*	*03/30/10*
ThinkPad Battery 55++ (9-cell)	57Y4186	*ann*	*03/30/10*
ThinkPad Battery 27++ (9-cell, slice)[43]	57Y4545	*ann*	*01/07/10*

[43] To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger[44]	40Y7625	*ann*	*09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[45, 62]	40Y7696	*ann*	*01/05/06*
ThinkPad 90W AC Adapter[62]	40Y7659	*ann*	*09/20/05*
ThinkPad 135W AC Adapter	55Y9317	*ann*	*01/07/10*
ThinkPad 65W AC Adapter with USB Hub[62]	57Y4600	*ann*	*09/07/10*
90W Ultraslim AC/DC Combo Adapter[62]	41R4493	*ann*	*09/22/09*

[45] Only compatible with the integrated graphics models.
[62] Compatible only with dual core models.

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

•iPod and iPhone Charge Tip (L10a)	41R4481	*ann*	*12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann*	*01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	*ann*	*08/18/09*
Lenovo Messenger Max	41U5253	*ann*	*05/01/07*
Lenovo Performance BackPack	41U5254	*ann*	*05/01/07*
ThinkPad Business Topload Case	43R2476	*ann*	*05/13/08*
ThinkPad Business Backpack	43R2482	*ann*	*05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann*	*01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann*	*01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann*	*01/07/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann*	*10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann*	*11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann*	*10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann*	*10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann*	*10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann*	*10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann*	*06/10/10*

More information at **www.lenovo.com/support/monitors**
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann*	*05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann*	*08/04/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann*	*08/05/08*
ThinkVision Soundbar	45K1263	*ann*	*09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann*	*09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
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ThinkPad®

Lenovo® ThinkPad W520

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ThinkPad® W520 4270 (Optimus) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Color calib	Bat-tery cells	Intel vPro	Preload
4270-26U	i7-2620M	4GBx1	15.6" HD	1000M	720p	500G 7200	Intel 6205[28]	WWAN upg	None	Blue	None	***9***	vPro	Pro 64

- ***This small and medium business (SMB) model is part of the US TopSeller™ Program***
- ***Power-packed engineering with Open GL graphics and ISV certifications***
- ***This system is Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Color calibration	None
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model announced February 22, 2011

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ThinkPad® W520 4276 (Optimus) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel AMT	Intel vPro	Preload
4276-2QU	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6205[28]	WWAN upg				***9***	iAMT	vPro	Pro 64
4276-2PU	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg				***9***	iAMT	vPro	Pro 64
4276-23U	i7-2920XM	4GBx4	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger	X-Rite	***9***	iAMT		Pro 64
4276-39U	i7-2820QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64
4276-38U	i7-2720QM	4GBx1	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64
4276-37U	i7-2720QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64
☞ 4276-3AU	i7-2630QM	4GBx2	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger		***9***			Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2920XM processor (quad-core, 2.50GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Color calibration	*Some:* huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced June 21, 2001; previous models on February 22 or March 1, 2011

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ThinkPad® W520 4276 (Optimus) - TopSeller (October 2011)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel AMT	Intel vPro	Preload
4276-3LU	i7-2860QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205[28]	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64
4276-3KU	i7-2760QM	4GBx1	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64
4276-3JU	i7-2760QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64
4276-3NU	i7-2960XM	4GBx4	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger	X-Rite	***9***	iAMT	vPro	Pro 64
4276-3MU	i7-2760QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		***9***	iAMT	vPro	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology **Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology **Intel Core i7-2960XM processor (quad-core, 2.70GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Color calibration	*Some:* huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced October 11 or November 1, 2011

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ThinkPad® W520 4282 (Optimus)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4282-3SU	i7-2720QM	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205[28]	WWAN upg		Fing		***9***	vPro		Pro 64
4282-3RU	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Fing		***9***	vPro		Pro 64
4282-26U	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Fing	X-Rite	***9***	vPro	G	Pro 64
4282-23U	i7-2820QM	4GBx2	15.6" FHD	2000M	720p	500G 7200	Intel 6300[28]	WWAN upg		Fing		***9***	vPro	G	Pro 64
4282-24U	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6300	WWAN upg				***9***	vPro	G	Pro 64
4282-25U	i5-2540M	2GBx2	15.6" HD+	1000M	720p	320G 7200	Intel 6205	WWAN upg				***9***	vPro	G	Pro 64
☞ 4282-4CU	i7-2720QM	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Fing		***9***	vPro	G	Pro 64
☞ 4282-4BU	i7-2620M	4GBx1	15.6" HD+	1000M		320G 7200	Intel 6205	WWAN upg	Smart			***9***	vPro	G	Pro 64

• ***Power-packed engineering with Open GL graphics and ISV certifications***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache)**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache)**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Color calibration	*Some:* huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced March 1, 2011; previous models on February 22, 2011

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ThinkPad® W520 4282 (Optimus) - April 2011

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk(s) SATA GB[8] rpm	RAID	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel AMT	Intel vPro	Global (G) GMP (P)	Pre-load
4282-4EU	i7-2630QM	4GBx2	15.6" FHD	2000M	2x500G 7200	0		Intel 6300[28]	upg		Fing	X-Rite	***9***			G	Pro 64
4282-45U	i7-2820QM	4GBx1	15.6" FHD	1000M	1x500G 7200		DVD±RW	Intel 6300	upg	Smart		X-Rite	***9***	iAMT	vPro		Pro 64
4282-4GU	i7-2920XM	4GBx2	15.6" FHD	2000M	2x500G 7200	1		Intel 6300	upg	Smart	Fing	X-Rite	***9***	iAMT	vPro		Pro 64
4282-4ZU	i7-2760QM	4GBx1	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg				***9***	iAMT	vPro	G	Pro 64
4282-4YU	i7-2860QM	4GBx2	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg		Fing		***9***	iAMT	vPro	G	Pro 64
4282-4UU	i7-2760QM	4GBx1	15.6" FHD	1000M	1x500G 7200		DVD±RW	Intel 6205[28]	upg		Fing		***9***	iAMT	vPro		Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Power-packed engineering with Open GL graphics and ISV certifications***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology **Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology **Intel Core i7-2920XM processor (quad-core, 2.50GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	*Some:* DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Color calibration	*Some:* huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced April 5, June 21, or November 1, 2011

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ThinkPad® W520 4284 (Optimus) - Onsite

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel vPro	Global (G) GMP (P)		Pre-load
4284-26U	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205[28]	WWAN upg		Finger	X-Rite	***9***	vPro	G	P	Pro 64
4284-23U	i7-2820QM	4GBx2	15.6" FHD	2000M	720p	500G 7200	Intel 6300[28]	WWAN upg				***9***	vPro	G	P	Pro 64
4284-24U	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6300	WWAN upg				***9***	vPro	G	P	Pro 64
4284-25U	i5-2540M	2GBx2	15.6" HD+	1000M	720p	320G 7200	Intel 6205	WWAN upg				***9***	vPro	G	P	Pro 64
☞ 4284-4CU	i7-2720QM	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger		***9***	vPro	G	P	Pro 64
☞ 4284-4BU	i7-2620M	4GBx1	15.6" HD+	1000M		320G 7200	Intel 6205	WWAN upg	Smart			***9***	vPro	G	P	Pro 64

- ***These models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Power-packed engineering with Open GL graphics and ISV certifications***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache)**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache)**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	*Some:* **15.6"** (396mm) **HD+ (1600x900) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut *Some:* **15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Color calibration	*Some:* huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	*Some:* Smart Card reader
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced March 1, 2011; previous models on February 22, 2011

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ThinkPad® W520 4284 (Optimus) - Onsite (April 2011)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB[8] rpm	RAID	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Color calib	Bat-tery cells		Intel vPro	Global (G) GMP (P)		Pre-load
4284-4EU	i7-2630QM	4GBx2	15.6" FHD	2000M	2x500G 7200	0		Intel 6300[28]	upg	Finger	X-Rite	***9***			G	P	Pro 64
4284-4YU	i7-2860QM	4GBx2	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg			***9***	iAMT	vPro	G	P	Pro 64
4284-4ZU	i7-2760QM	4GBx1	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg			***9***	iAMT	vPro	G	P	Pro 64

- ***Part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Power-packed engineering with Open GL graphics and ISV certifications***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Mobile workstation; two spindles*
Processor	**Intel® Core™ i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology **Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache),** DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology
Memory	*dual-core model:* 16GB max[7], two 204-pin SO-DIMM sockets *quad-core model:* 32GB max, four 204-pin SO-DIMM sockets *All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable
Optical	*Some:* DVD burner, 12.7mm Ultrabay Enhanced, removable
Ultrabay	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ *All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	**15.6"** (396mm) **FHD (1920x1080) color**, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut
Color calibration	*Some:* huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, **Intel HD Graphics 3000** in processor, and **NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions (WxDxH)[3]	*HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm *FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm
Weight[2]	*6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg)
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Bottom:* Glass-fiber reinforced plastic without paint
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life[10]	*6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr
Chipset	**Mobile Intel QM67 Express Chipset**
ExpressCard	One slot (ExpressCard/34)
Smart Card Read	None
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	56K V.92[6] modem
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced April 5 or November 1, 2011

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ThinkPad® W520 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann 03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann 03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann 03/02/10*

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	*ann 06/23/09*
DVD Burner Ultrabay Enhanced II SATA	43N3294	*ann 01/07/10*

Storage and removable storage

256GB 1.8" FDE Solid State Drive[41]	43N3417	*ann 06/23/09*
160GB 2.5" Intel Solid State Drive II[41]	0A33983	*ann 02/22/11*
128GB 2.5" Solid State Drive II[41]	0A33984	*ann 02/22/11*
250GB 7200rpm SATA 3.0G/s OPAL-capable FDE HDD II[41]	0A33985	*ann 02/22/11*
320GB 7200rpm SATA 3.0Gb/s Hard Drive II[41]	0A33986	*ann 02/22/11*
320GB 5400rpm SATA 3.0Gb/s Hard Drive II[41]	0A33987	*ann 02/22/11*

[41] Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann 03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann 05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann 11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann 01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann 06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann 04/12/11*

ThinkPad Expansion

ThinkPad Mini Dock Plus Series 3 - 170W	433830U	*ann 02/22/11*
Lenovo® Essential Notebook Stand	45J9292	*ann 05/12/09*

Keyboard

TrackPoint Cap Collection	73P2698	*ann 12/16/03*
USB Numeric Keypad	33L3225	*ann 05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann 06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann 03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann 08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann 02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann 03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann 05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann 01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann 12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann 08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann 06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann 01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann 01/07/10*

Security

3M 15.6W Privacy Filter from Lenovo	0A61771	*ann 04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann 02/21/06*

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	*ann 03/30/10*
ThinkPad Battery 55++ (9-cell)	57Y4186	*ann 03/30/10*
ThinkPad Battery 27++ (9-cell, slice)[43]	57Y4545	*ann 01/07/10*

[43] To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger[44]	40Y7625	*ann 09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 170W AC Adapter for W520	0A36227	*ann 03/01/11*

More info at **www.lenovo.com/support/poweradapters**

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	*ann 08/18/09*
Lenovo Messenger Max	41U5253	*ann 05/01/07*
Lenovo Performance BackPack	41U5254	*ann 05/01/07*
ThinkPad Business Topload Case	43R2476	*ann 05/13/08*
ThinkPad Business Backpack	43R2482	*ann 05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann 01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann 01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann 01/07/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann 10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann 11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann 10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann 10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann 10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann 10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann 06/10/10*

More information at **www.lenovo.com/support/monitors**
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann 05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann 08/04/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann 08/05/08*
ThinkVision Soundbar	45K1263	*ann 09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann 12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann 09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann 08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann 09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad®

Lenovo® ThinkPad X120e

Lenovo ThinkPad X120e

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Lenovo ThinkPad X120e

ThinkPad® X120e (0596) - TopSeller

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB[8] rpm	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Blue-tooth	Bat-tery cells	Preload
0596-2UU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-2TU	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-2SU	E-240	1.50	2+1GB	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2RU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2PU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2NU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0596-24U	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-22U	E-240	1.50	1GBx1	11.6" HD	0.3M	HD 6310	250G 5400	None	TP 11b/g/n	WWAN upg			3	Prem 32
☞ 0596-2ZU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Entry ultraportable for excellent usability and reliability; one spindle*
Processor	**AMD Fusion™ Processor E-240** with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache **AMD Fusion Processor E-350** with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache
Memory	4GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller
Optical	None (use optional USB-based optical drive)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable, Active Protection System™
Widescreen display	**11.6"** (295mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator
Graphics	**AMD Radeon™ HD 6310M graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; *Maximum external resolution:* 2048x1536 (VGA)@60Hz; 1920x1200 (HDMI)@60Hz
Keyboard	Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
ThinkLight™	None
Dimensions[3]	*3-cell:* 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm *6-cell:* 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm
Weight[2]	*3-cell:* from 2.93 lb (1.33kg); *6-cell:* from 3.31 lb (1.5kg)
Case color	Matte black (top)
Case material	*Top:* PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell
Battery - life[10]	3-*cell:* up to 3 hr; 6-*cell:* up to 6 hr
Chipset	**AMD A50M FCH Chipset**
Multicard reader	4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)
ExpressCard	None
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 2000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable carrier at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)
Ethernet	Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1
Audio support	High Definition (HD) Audio, Conexant CX20582 codec / stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	None
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Home Premium 32
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)

Preloaded applications[14] (all OSes; only some listed)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies

65-watt AC Adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-X120-E sheet;

For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced May 3, 2011; previous models on February 15, 2011

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ThinkPad® X120e (0611)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB[8] rpm	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Blue-tooth	Bat-tery cells	Preload
0611-2NU	E-350	1.60	2+1GB	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0611-2HU	E-350	1.60	2+1GB	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0611-2EU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0611-2DU	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0611-2BU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0611-29U	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
☞ 0611-2SU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64

- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Entry ultraportable for excellent usability and reliability; one spindle*
Processor	**AMD Fusion™ Processor E-240** with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache **AMD Fusion Processor E-350** with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache
Memory	4GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller
Optical	None (use optional USB-based optical drive)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable, Active Protection System™
Widescreen display	**11.6"** (295mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator
Graphics	**AMD Radeon™ HD 6310M graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; *Maximum external resolution:* 2048x1536 (VGA)@60Hz; 1920x1200 (HDMI)@60Hz
Keyboard	Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
ThinkLight™	None
Dimensions[3]	*3-cell:* 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm *6-cell:* 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm
Weight[2]	*3-cell:* from 2.93 lb (1.33kg); *6-cell:* from 3.31 lb (1.5kg)
Case color	Matte black (top)
Case material	*Top:* PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell
Battery - life[10]	3-*cell:* up to 3 hr; 6-*cell:* up to 6 hr
Chipset	**AMD A50M FCH Chipset**
Multicard reader	4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)
ExpressCard	None
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 2000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable carrier at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)
Ethernet	Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1
Audio support	High Definition (HD) Audio, Conexant CX20582 codec / stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	None
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)

Preloaded applications[14] (all OSes; only some listed)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies

65-watt AC Adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-X120-E sheet;

For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US model announced May 3, 2011; previous models on February 15, 2011

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ThinkPad® X120e Accessories

Memory[64]

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann*	*03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann*	*03/02/10*

[64] System automatically clocks down for processors with 1066MHz DDR3 memory controller.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann*	*03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann*	*05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann*	*11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive[53]	57Y4400	*ann*	*01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann*	*06/14/11*

[53] USB-only attach.

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	*ann*	*01/07/10*
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	*ann*	*01/07/10*

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	*ann*	*05/12/09*

Keyboard

TrackPoint Cap Collection	73P2698	*ann*	*12/16/03*
USB Numeric Keypad	33L3225	*ann*	*05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann*	*06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann*	*03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann*	*08/18/09*
Preferred Pro USB Fingerprint Keyboard	73P4730	*ann*	*02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann*	*03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann*	*05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann*	*01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann*	*12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann*	*08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann*	*06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann*	*01/22/08*
Lenovo Wireless Laser Mouse - Black[52]	45K1696	*ann*	*11/25/08*
Lenovo Wireless Laser Mouse - Red/Black[52]	51J0198	*ann*	*11/25/08*

Security

3M 11.6W Privacy Filter from Lenovo	0A61768	*ann*	*04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann*	*02/21/06*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann*	*01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann*	*02/26/08*

Batteries

ThinkPad Battery 17+ (6-cell)	57Y4559	*ann*	*01/05/10*
ThinkPad External Battery Charger[44]	40Y7625	*ann*	*09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter	40Y7696	*ann*	*01/05/06*
ThinkPad 90W AC Adapter	40Y7659	*ann*	*09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann*	*09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann*	*09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

•iPod and iPhone Charge Tip (L10a)	41R4481	*ann*	*12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann*	*01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

ThinkPad 11W Case Sleeve	57Y4286	*ann*	*01/05/10*
ThinkPad 11W Sling Case	57Y4287	*ann*	*01/05/10*

More information at **www.lenovo.com/support/cases**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann*	*10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann*	*11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann*	*10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann*	*10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann*	*10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann*	*10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann*	*06/10/10*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann*	*05/12/09*
ThinkVision Soundbar	45K1263	*ann*	*09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann*	*09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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Lenovo® ThinkPad X220

Lenovo ThinkPad X220 with
ThinkPad Ultrabase Series 3
0A33932

ThinkPad 65W AC Adapter
40Y7696

Lenovo ThinkPad X220

Lenovo ThinkPad X220

Lenovo ThinkPad X220

ThinkPad® X220 (4287) - TopSeller

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Battery cells	Intel AMT	Intel vPro	Preload
4287-3KU	i5-2520M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205	Gobi	selectable	9	iAMT	vPro	Pro 64
4287-2WU	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	DVD±RW	UltraB	Intel 1000	upg	None	6	No	No	Pro 64
4287-2VU	i5-2410M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	upg	None	6	No	No	Pro 64
4287-42U	i7-2620M	4GBx1	12.5" HD	720p	128G SSD	DVD±RW	UltraB	Intel 6205	upg	None	6	iAMT	vPro	Pro 64
4287-43U	i5-2430M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 1000	upg	None	6	No	No	Pro 64
4287-57U	i7-2640M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205	upg	None	6	iAMT	vPro	Pro 64

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology **Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
Disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Display	*Some:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* (Premium) **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort™ (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage® button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express® Mini Card slots
PCIe WLAN[4]	*Some:* 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n[28], PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
PCIe WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS
Carrier	*Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited Warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
Genuine Windows® 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage® System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft® Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo® Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort™ (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65W AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information

US model(s) announced March 1, May 3, August 2, October 4, or October 18, 2011

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ThinkPad® X220 (4290)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4290-2WU	i5-2540M	4GBx1	12.5" HD Prem	720p	320G 7200	DVD±RW	UltraB	Intel 6205[28]	WWAN upg	Fing	Blue	***9***	vPro	G	Pro 64
4290-2XU	i5-2540M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg			6	vPro	G	Pro 64
4290-37U	i5-2540M	4GBx1	12.5" HD		320G 7200	Optional	Opt	Intel 6300[28]	WWAN upg	Fing	Blue	6	vPro		Pro 64
4290-36U	i5-2540M	4GBx1	12.5" HD		320G 7200	Optional	Opt	Intel 6205	WWAN upg			***9***	vPro		Pro 64
4290-35U	i7-2620M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	***9***	vPro		Pro 64
4290-34U	i5-2520M	4GBx1	12.5" HD Prem		320G 7200	Optional	Opt	Intel 6300	WWAN upg	Fing	Blue	6	vPro		Pro 64
4290-33U	i5-2540M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	6	vPro		Pro 64
4290-32U	i5-2540M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	***9***	vPro		Pro 64
4290-2ZU	i5-2520M	2GBx1	12.5" HD		320G 7200	Optional	Opt	Intel 6205	WWAN upg			6	vPro		Pro 64
4290-4XU	i7-2640M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	***9***	vPro	G	Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Some:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* (Premium) **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced March 1 or October 4, 2011

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ThinkPad® X220 (4290) - May 2011

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4290-4FU	i5-2520M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205[28]	Gobi 3000	selectable	***9***	vPro		Pro 64
4290-48U	i7-2620M	4GBx1	12.5" HD Prem		160G SSD	Optional	Optional	Intel 6300[28]	WWAN upg		***9***	vPro	G	Pro 64
4290-47U	i7-2620M	4GBx1	12.5" HD Prem		320G 7200	Optional	Optional	Intel 6300	WWAN upg		6	vPro	G	Pro 64
4290-46U	i5-2520M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg		6	vPro	G	Pro 64
4290-45U	i7-2620M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg		***9***	vPro	G	Pro 64
4290-44U	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg		6	vPro	G	Pro 64
4290-43U	i5-2520M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205	WWAN upg		6	vPro	G	Pro 64
4290-42U	i5-2540M	4GBx1	12.5" HD Prem		128G SSD	Optional	Optional	Intel 6300	WWAN upg		6	vPro	G	Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay	Option for ThinkPad Ultrabase Series 3
SATA disk	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Some:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* (Premium) **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US models announced May 3, 2011

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ThinkPad® X220 (4291) - Onsite

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4291-33U	i5-2540M	4GBx1	12.5" HD		320G 7200			Intel 6300[28]	WWAN upg	Fing	Blue	6	vPro		Pro 64
4291-32U	i5-2540M	4GBx1	12.5" HD		320G 7200			Intel 6205[28]	WWAN upg			***9***	vPro		Pro 64
4291-2ZU	i5-2520M	4GBx1	12.5" HD Prem	720p	320G 7200			Intel 6205	WWAN upg			***9***	vPro		Pro 64
4291-2YU	i5-2540M	2GBx1	12.5" HD	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	vPro		Pro 64
4291-2XU	i5-2540M	4GBx1	12.5" HD	720p	320G 7200			Intel 6205	WWAN upg			6	vPro	G P	Pro 64
4291-2WU	i5-2540M	4GBx1	12.5" HD Prem	720p	320G 7200	DVD±RW	UltraB	Intel 6205	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64
4291-2VU	i7-2620M	4GBx1	12.5" HD Prem		320G 7200			Intel 6205	WWAN upg	Fing	Blue	***9***	vPro		Pro 64
4291-2UU	i5-2540M	2GBx1	12.5" HD Prem	720p	320G 7200			Intel 6205	WWAN upg			***9***	vPro		Pro 64
4291-2TU	i5-2520M	2GBx1	12.5" HD		320G 7200			Intel 6205	WWAN upg	Fing	Blue	***9***	vPro		Pro 64

- ***Some models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Some:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* (Premium) **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US models announced March 1, 2011

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ThinkPad® X220 (4291) - Onsite (May 2011)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4291-48U	i7-2620M	4GBx1	12.5" HD Prem		160G SSD	Optional	Optional	Intel 6300[28]	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64
4291-47U	i7-2620M	4GBx1	12.5" HD Prem		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-46U	i5-2520M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-45U	i7-2620M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64
4291-43U	i5-2520M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205[28]	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-44U	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-42U	i5-2540M	4GBx1	12.5" HD Prem		128G SSD	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6	vPro	G P	Pro 64
4291-4XU	i7-2640M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg	Fing	Blue	***9***	vPro	G P	Pro 64

- ***Part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay	Option for ThinkPad Ultrabase Series 3
SATA disk	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Some:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio *Some:* (Premium) **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

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  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced May 3 or October 4, 2011

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ThinkPad® X220i (4286) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4286-2AU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- ***This small and medium business (SMB) model is part of the US TopSeller™ Program***
- ***This system is Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	Option for ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	**12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	None
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Skype™ for Windows

Supports ThinkVantage® technologies

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- Provides desktop expansion and cable management for X220 and X220 Tablet
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- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412

  Disks supported (some):
  - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model announced March 1, 2011

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ThinkPad® X220i (4287) - TopSeller

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4287-2UU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64
4287-3ZU	i3-2350M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*An ultraportable for the executive on the move; one spindle*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	Option for ThinkPad Ultrabase Series 3
Ultrabay SATA disk	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	**12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*without UltraBase; 4/6-cell:* 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
Weight[2]	*4-cell:* from 2.97 lb (1.35kg); *6-cell:* from 3.31 lb (1.50kg); *9-cell:* from 3.67 lb (1.67kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
External Battery	None
Battery - life[10]	*4-cell:* up to 4.1 hr; *6-cell:* up to 9.2 hr; *9-cell:* up to 13.8 hr; *external battery:* up to 9.4 hr; *9-cell plus external battery:* up to 23.2 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	*i7 model:* One USB 3.0, two USB 2.0 (one powered) *other model:* Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	None
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	None
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB 2.5" SSD II 0A33984

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced March 1 or October 4, 2011

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ThinkPad® X220 Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann*	*03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann*	*03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann*	*03/02/10*

Ultrabay Slim 9.5mm

Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3

Serial ATA Hard Drive Bay Adapter III	43N3412	*ann*	*06/23/09*
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	*ann*	*08/03/10*
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	*ann*	*06/23/09*

Storage and removable storage

160GB 2.5" Intel Solid State Drive II[41]	0A33983	*ann*	*02/22/11*
128GB 2.5" Solid State Drive II[41]	0A33984	*ann*	*02/22/11*
250GB 7200rpm SATA 3.0G/s OPAL-capable FDE HDD II[41]	0A33985	*ann*	*02/22/11*
320GB 7200rpm SATA 3.0Gb/s Hard Drive II[41]	0A33986	*ann*	*02/22/11*
320GB 5400rpm SATA 3.0Gb/s Hard Drive II[41]	0A33987	*ann*	*02/22/11*

[41] Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in ThinkPad Ultrabase Series 3

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann*	*03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann*	*05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann*	*11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive[53]	57Y4400	*ann*	*01/07/10*

[53] USB-only attach.

Lenovo Slim USB Portable DVD Burner	0A33988	*ann*	*06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann*	*04/12/11*

ThinkPad Expansion

ThinkPad Ultrabase Series 3	0A33932	*ann*	*03/01/11*
ThinkPad Port Replicator Series 3	433610W	*ann*	*06/23/09*
ThinkPad Mini Dock Series 3 - 90W	433710U	*ann*	*06/23/09*
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	*ann*	*06/23/09*
Lenovo® Essential Notebook Stand	45J9292	*ann*	*05/12/09*

Keyboard

TrackPoint Cap Collection	73P2698	*ann*	*12/16/03*
USB Numeric Keypad	33L3225	*ann*	*05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann*	*06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann*	*03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann*	*08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann*	*02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann*	*03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann*	*05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann*	*01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann*	*12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann*	*08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann*	*06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann*	*01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann*	*01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann*	*02/26/08*

Security

3M 12.5W Privacy Filter from Lenovo	0A61770	*ann*	*04/05/11*
Kensington® MicroSaver® Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann*	*02/21/06*
ExpressCard Gemplus Smart Card Reader	41N3043	*ann*	*06/27/06*

Batteries

ThinkPad Battery 29 (4-cell)	0A36281	*ann*	*03/01/11*
ThinkPad Battery 29+ (6-cell)	0A36282	*ann*	*03/01/11*
ThinkPad Battery 29++ (9-cell)	0A36283	*ann*	*03/01/11*
ThinkPad Battery 19+ (6-cell, Slim External)	0A36280	*ann*	*03/01/11*
ThinkPad External Battery Charger[44]	40Y7625	*ann*	*09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter	40Y7696	*ann*	*01/05/06*
ThinkPad 90W AC Adapter	40Y7659	*ann*	*09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann*	*09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann*	*09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

•iPod and iPhone Charge Tip (L10a)	41R4481	*ann*	*12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann*	*01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 12" widescreen models:

ThinkPad 12W Case Sleeve	51J0476	*ann*	*08/18/09*

Up to 13.3" widescreen models:

ThinkPad Ultraportable Case	41U5062	*ann*	*05/13/08*

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	*ann*	*05/01/07*
Lenovo Performance BackPack	41U5254	*ann*	*05/01/07*
ThinkPad Business Topload Case	43R2476	*ann*	*05/13/08*
ThinkPad Business Backpack	43R2482	*ann*	*05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann*	*05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann*	*05/13/08*

More information at **www.lenovo.com/support/cases**
Lenovo luxury cases at **www.lenovoluxurycases.com**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann*	*10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann*	*11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann*	*10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann*	*10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann*	*10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann*	*10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann*	*06/10/10*
ThinkVision L2440p Wide 24" Monitor	4420HB2	*ann*	*09/17/08*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann*	*05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann*	*08/04/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann*	*08/05/08*
ThinkVision Soundbar	45K1263	*ann*	*09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann*	*09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad®

Lenovo® ThinkPad X220 Tablet

Lenovo ThinkPad X220 Tablet

Lenovo ThinkPad X220 Tablet

Lenovo ThinkPad Battery 19+ (6-cell, Slim External)
0A36280

Lenovo ThinkPad X220 Tablet

Lenovo ThinkPad X220 Tablet

ThinkPad® X220 Tablet (4294) - TopSeller

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4294-23U	i5-2520M	4+2GB	12.5" HD *Multi*	720p	160G SSD	DVD±RW	UltraBase	WiMAX	WWAN upg	Finger	Blue	6	vPro	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	DVD burner, removable from ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	None
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced May 10, 2011

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ThinkPad® X220 Tablet (4296) - TopSeller

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Ext Battery cells	Intel vPro	Preload
4296-38U	i7-2620M	4GBx2	12.5" HD *Multi*	720p	160G SSD	DVD±RW	UltraB	Intel 6205[28]	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-37U	i7-2620M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-36U	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-35U	i7-2620M	4GBx2	12.5" HD *Outdoor*	720p	160G SSD			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-34U	i7-2620M	4GBx2	12.5" HD *Multi*	720p	160G SSD			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-33U	i5-2520M	4GBx1	12.5" HD *Multi*		320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Prem 64
4296-32U	i5-2520M	4GBx1	12.5" HD *Multi*		320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-2ZU	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-2YU	i7-2620M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-2XU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64
4296-2WU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	None
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Home Premium 64
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US models announced March 22, 2011

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ThinkPad® X220 Tablet (4296) - TopSeller (May 2011)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Battery cells	Intel vPro	Preload
4296-3BU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200	Optional	Optional	Intel 6205[28]	Gobi 3000	selectable	6	vPro	Pro 64
4296-3MU	i7-2640M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraBase	Intel 6205	WWAN upg		6	vPro	Pro 64
4296-3LU	i7-2640M	4GBx1	12.5" HD *Multi*	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg		6	vPro	Pro 64

- ***Small and medium business (SMB) model(s), part of the US TopSeller™ Program***
- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	None
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced May 10 or October 4, 2011

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ThinkPad® X220 Tablet (4298)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4298-44U	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200	DVD±RW	UltraB	Intel 6205[28]	upg	Fing	Blue	6		vPro		Pro 64
4298-43U	i7-2620M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4298-42U	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4298-3ZU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4298-3YU	i7-2620M	4GBx1	12.5" HD *Multi*	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4298-3XU	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
✂ 4298-3WU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
✂ 4298-3VU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
✂ 4298-3UU	i7-2620M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
✂ 4298-3TU	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
4298-3SU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4298-3RU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4298-3QU	i5-2520M	4GBx1	12.5" HD *Outdoor*		320G 7200			Intel 6205	upg			6		vPro		Pro 64
4298-3PU	i5-2520M	4GBx1	12.5" HD *Multi*		320G 7200			Intel 6205	upg			6		vPro		Pro 64
4298-27U	i5-2520M	2GBx1	12.5" HD *Outdoor*		320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	G	Pro 64

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	*Some:* Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280)
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
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Preloaded applications[14] (all OSes; only some listed)
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- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US models announced March 22, 2011
✂ US models withdrawn effective May 2011

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ThinkPad® X220 Tablet (4298) - May 2011

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Bat-tery cells	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4298-4BU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	128G SSD	Optional	Opt	Intel 6205[28]	WWAN upg		6		vPro	G	Pro 64
4298-4GU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200	Optional	Opt	Intel 6205	Gobi 3000	selectable	6		vPro		Pro 64
4298-4CU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	128G SSD	Optional	Opt	Intel 6205	WWAN upg		6		vPro	G	Pro 64
4298-26U	i7-2620M	2GBx2	12.5" HD *Multi*		320G 7200	Optional	Opt	Intel 6300[28]	WWAN upg		6	6	vPro	G	Pro 64
4298-4TU	i7-2640M	4GBx1	12.5" HD *Multi*	720p	128G SSD	Optional	Opt	Intel 6205	WWAN upg		6		vPro	G	Pro 64

- ***A depot repair service 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay	Option for ThinkPad Ultrabase Series 3
SATA disk	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	*Some:* Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280)
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US model(s) announced May 3, May 10, July 12, or October 4, 2011

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ThinkPad® X220 Tablet (4299) - Onsite

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4299-36U	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200	DVD±RW	UltraB	Intel 6205[28]	upg	Fing	Blue	6		vPro	G P	Pro 64
4299-35U	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro	G P	Pro 64
4299-34U	i7-2620M	4GBx1	12.5" HD *Multi*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4299-33U	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4299-32U	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro	G P	Pro 64
4299-2ZU	i7-2620M	4GBx1	12.5" HD *Multi*	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro	G P	Pro 64
✂ 4299-2YU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
✂ 4299-2XU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
4299-2WU	i5-2520M	4GBx1	12.5" HD *Outdoor*		320G 7200			Intel 6205	upg			6		vPro		Pro 64
4299-2VU	i5-2520M	4GBx1	12.5" HD *Multi*		320G 7200			Intel 6205	upg			6		vPro		Pro 64
4299-2UU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
4299-2TU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro		Pro 64
✂ 4299-2SU	i7-2620M	4GBx1	12.5" HD *Outdoor*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
✂ 4299-2RU	i7-2620M	4GBx1	12.5" HD *Multi*	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro		Pro 64
4299-27U	i5-2520M	2GBx1	12.5" HD *Outdoor*		320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	G P	Pro 64

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	*Some:* DVD burner, removable from ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	*Some:* Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280)
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Some:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	*Some:* Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	*Some:* UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri, excluding holidays, next business day response / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)

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- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US models announced March 22, 2011
✂ US models withdrawn effective May 2011

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ThinkPad® X220 Tablet (4299) - Onsite (May 2011)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Bat-tery cells	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4299-4BU	i5-2520M	4GBx1	12.5" HD *Multi*	720p	128G SSD	Optional	Opt	Intel 6205[28]	WWAN upg	6		vPro	G P	Pro 64
4299-4CU	i5-2520M	4GBx1	12.5" HD *Outdoor*	720p	128G SSD	Optional	Opt	Intel 6205	WWAN upg	6		vPro	G P	Pro 64
4299-26U	i7-2620M	2GBx2	12.5" HD *Multi*		320G 7200	Optional	Opt	Intel 6300[28]	WWAN upg	6	6	vPro	G P	Pro 64
4299-4TU	i7-2640M	4GBx1	12.5" HD *Multi*	720p	128G SSD	Optional	Opt	Intel 6205	WWAN upg	6		vPro	G P	Pro 64

- ***Part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology **Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	*Some:* HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	*Some:* Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280)
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri, excluding holidays, next business day response / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)

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  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information

US model(s) announced May 3, May 10, July 12, or October 4, 2011

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ThinkPad® X220i Tablet (4294) - TopSeller

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4294-2EU	i3-2310M	4GBx1	12.5" HD *Multi*	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	Fing	Blue	6	None	Pro 64
4294-2DU	i3-2310M	4GBx1	12.5" HD *Multi*	720p	320G 7200	Optional	Optional	Intel 6205[28]	WWAN upg	Fing	Blue	6	None	Pro 64

- ***These small and medium business (SMB) models are part of the US TopSeller™ Program***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Convertible tablet ultraportable; one spindle*
Processor	**Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical	Option for ThinkPad Ultrabase Series 3
Ultrabay	Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3
mSATA™ SSD	None
Widescreen display	*Outdoor:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS *MultiTouch:* **12.5"** (317.5mm) **HD (1366x768) TFT color**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture *All:* **WideView** (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), **rotate and swivel hinge**, power, reset, and rotation buttons on display bottom
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*without UltraBase; 3-cell:* 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm
Weight[2]	*3-cell:* from 3.67 lb (1.66kg); *6-cell:* from 3.97 lb (1.80kg)
Case material	*Display cover:* Magnesium + PCABS; *Bottom:* Magnesium alloy
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
Extended Battery	None
Battery - life[10]	*3-cell:* up to 4.0 hr; *6-cell:* up to 8.8 hr; *slice battery:* up to 9.0 hr; *6-cell plus slice battery:* up to 17.8 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Ultrabase	*Option:* ThinkPad Ultrabase Series 3 (see right side)
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	None
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
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- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
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- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
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- Corel Burn.Now™ Lenovo Edition (DVD±RW)

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- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
    Disks supported (some):
    - 128GB 2.5" SSD II 0A33984
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

65-watt AC Adapter
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

See footnotes for more detailed information
US models announced March 22, 2011

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ThinkPad® X220 Tablet Accessories

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	*ann*	*03/02/10*
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	*ann*	*03/02/10*
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann*	*03/02/10*

Ultrabay Slim 9.5mm

Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3

Serial ATA Hard Drive Bay Adapter III	43N3412	*ann*	*06/23/09*
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	*ann*	*08/03/10*
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	*ann*	*06/23/09*

Storage and removable storage

160GB 2.5" Intel Solid State Drive II[41]	0A33983	*ann*	*02/22/11*
128GB 2.5" Solid State Drive II[41]	0A33984	*ann*	*02/22/11*
250GB 7200rpm SATA 3.0G/s OPAL-capable FDE HDD II[41]	0A33985	*ann*	*02/22/11*
320GB 7200rpm SATA 3.0Gb/s Hard Drive II[41]	0A33986	*ann*	*02/22/11*
320GB 5400rpm SATA 3.0Gb/s Hard Drive II[41]	0A33987	*ann*	*02/22/11*

[41] Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in ThinkPad Ultrabase Series 3

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann*	*03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann*	*05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann*	*11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive[53]	57Y4400	*ann*	*01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann*	*06/14/11*

[53] USB-only attach.

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann*	*04/12/11*

ThinkPad Expansion

ThinkPad Ultrabase Series 3	0A33932	*ann*	*03/01/11*
Lenovo® Essential Notebook Stand	45J9292	*ann*	*05/12/09*

Keyboard

TrackPoint Cap Collection	73P2698	*ann*	*12/16/03*
USB Numeric Keypad	33L3225	*ann*	*05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann*	*06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann*	*03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann*	*08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann*	*02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann*	*03/24/09*

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann*	*05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann*	*01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann*	*12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann*	*08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann*	*06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann*	*01/22/08*

Security

Kensington® MicroSaver® Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann*	*02/21/06*
ExpressCard Gemplus Smart Card Reader	41N3043	*ann*	*06/27/06*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann*	*01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann*	*02/26/08*

Tablet

ThinkPad Digitizer Pen	41U3143	*ann*	*11/14/06*
ThinkPad Tablet Tether (3-pack)	41U4820	*ann*	*11/14/06*

Batteries

ThinkPad Battery 52 (3-cell)	0A36285	*ann*	*03/22/11*
ThinkPad Battery 52+ (6-cell)	0A36286	*ann*	*03/22/11*
ThinkPad Battery 19+ (6-cell, Slim External)	0A36280	*ann*	*03/01/11*
ThinkPad External Battery Charger[44, 47]	40Y7625	*ann*	*09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

[47] Only supports *ThinkPad Battery 52 (3-cell) 0A36285*

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter	40Y7696	*ann*	*01/05/06*
ThinkPad 90W AC Adapter	40Y7659	*ann*	*09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann*	*09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann*	*09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

•iPod and iPhone Charge Tip (L10a)	41R4481	*ann*	*12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann*	*01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 12" widescreen models:

ThinkPad 12W Case Sleeve	51J0476	*ann*	*08/18/09*
ThinkPad X220 Tablet Sleeve	0A33883	*ann*	*03/22/11*

Up to 13.3" widescreen models:

ThinkPad Ultraportable Case	41U5062	*ann*	*05/13/08*

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	*ann*	*05/01/07*
Lenovo Performance BackPack	41U5254	*ann*	*05/01/07*
ThinkPad Business Topload Case	43R2476	*ann*	*05/13/08*
ThinkPad Business Backpack	43R2482	*ann*	*05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann*	*05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann*	*05/13/08*

More information at **www.lenovo.com/support/cases**

Lenovo luxury cases at **www.lenovoluxurycases.com**

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	*ann*	*10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann*	*11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann*	*10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann*	*10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann*	*10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann*	*10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann*	*06/10/10*
ThinkVision L2440p Wide 24" Monitor	4420HB2	*ann*	*09/17/08*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann*	*05/12/09*
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	*ann*	*08/04/09*
DisplayPort to Single-link DVI-D Cable	45J7915	*ann*	*08/05/08*
ThinkVision Soundbar	45K1263	*ann*	*09/16/08*
Kensington MicroSaver Cable Lock	73P2582	*ann*	*12/29/03*
Kensington Twin Head Cable Lock	45K1620	*ann*	*09/30/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann*	*09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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Lenovo® ThinkPad X1 with
ThinkPad Battery 39+ (6-cell slice)
0A36279

Lenovo ThinkPad X1

Lenovo ThinkPad X1

Lenovo ThinkPad X1

Lenovo ThinkPad X1

Lenovo ThinkPad X1

ThinkPad® X1 (1286) - TopSeller

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Ext Battery cells	Intel AMT	Intel vPro	Preload
1286-2XU	i7-2620M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg	None	Finger	BT	No	iAMT	No	Pro 32

- *Small and medium business (SMB) model(s), part of the US TopSeller™ Program*
- *Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning	*Premiere mobility, performance, and style; one spindle*
Processor	**Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo® installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711)
Optical	None
Disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive
mSATA™ SSD	None
Display	(Premium) **13.3"** (338mm) **HD (1366x768) TFT color**, anti-glare display with glossy infinity Corning® Gorilla® Glass LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external digital monitor support via HDMI™ or Mini DisplayPort™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; *Max external resolution:* 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz
Keyboard	6 row, ThinkVantage® button, LED backlit, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar[13]
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*13.3W" (WxDxH):* 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm
Weight[2]	*Integrated battery:* from 3.73 lb (1.69kg); *integrated plus slice battery:* from 4.52 lb (2.05kg)
Case material	*Display cover:* Magnesium/Aluminum + PC/ABS; *Bottom:* Magnesium/Aluminum
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery
Extended Battery	None
Battery - life[10]	*integrated battery:* up to 5.2 hr; *integrated plus slice battery:* up to 10.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	None
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express® Mini Card slots
PCIe WLAN[4]	11a/b/g/n[28], PCIe Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3
PCIe WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited Warranty[12]	**1-year** - depot repair service / service upgrades[22] available

Preloaded operating system[20]
Genuine Windows® 7 Professional 32

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage® System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo® SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft® Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage technologies

90-watt AC Adapter (RapidCharge)
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-X1 sheet;
For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced August 2, 2011

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ThinkPad® X1 (1291) - TopSeller

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Ext Battery cells	Intel AMT	Intel vPro	Preload
1291-2UU	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	No	iAMT	vPro	Prem 64
1291-2TU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6205	Gobi 3000	selectable	Finger	BT	No	iAMT	vPro	Pro 64
1291-27U	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg	None	Finger	BT	No	iAMT	vPro	Pro 64
1291-26U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	No	iAMT	vPro	Pro 64
1291-22U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64
1291-3CU	i5-2520M	8GBx1	13.3" HD Prem	720p	160G SSD	Intel 1000	WWAN upg	None	Finger	BT	No	No	No	Pro 64
1291-3DU	i3-2350M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 1000	WWAN upg	None	Finger	BT	No	No	No	Pro 64

- *Small and medium business (SMB) model(s), part of the US TopSeller™ Program*
- *A depot repair service 3-year limited warranty*
- *Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning	*Premiere mobility, performance, and style; one spindle*
Processor	**Intel® Core™ i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), HT technology **Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo® installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711)
Optical	None
Disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive
mSATA™ SSD	None
Display	(Premium) **13.3"** (338mm) **HD (1366x768) TFT color**, anti-glare display with glossy infinity Corning® Gorilla® Glass LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external digital monitor support via HDMI™ or Mini DisplayPort™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; *Max external resolution:* 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz
Keyboard	6 row, ThinkVantage® button, LED backlit, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar[13]
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*13.3W" (WxDxH):* 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm
Weight[2]	*Integrated battery:* from 3.73 lb (1.69kg); *integrated plus slice battery:* from 4.52 lb (2.05kg)
Case material	*Display cover:* Magnesium/Aluminum + PC/ABS; *Bottom:* Magnesium/Aluminum
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery
Extended Battery	*Some:* Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), RapidCharge
Battery - life[10]	*integrated battery:* up to 5.2 hr; *integrated plus slice battery:* up to 10.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	None
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express® Mini Card slots
PCIe WLAN[4]	*Some:* 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 *Some:* 11a/b/g/n[28], PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
PCIe WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	*Some:* Intel Active Management Technology (iAMT)
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited Warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
Some: Genuine Windows® 7 Home Premium 64
Some: Genuine Windows 7 Professional 64

Ready to install applications[14] (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage® System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo® SimpleTap

Preloaded applications[14] (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft® Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage technologies

90-watt AC Adapter (RapidCharge)
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-X1 sheet;
For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US model(s) announced May 17, May 24, August 2, or October 4, 2011

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ThinkPad® X1 (1293)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
1293-3EU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6205[28]	WWAN upg		Finger	Blue		vPro		Prem 64
1293-3DU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300[28]	WWAN upg		Finger	Blue		vPro	G	Pro 64
1293-3CU	i5-2520M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	Gobi 3000	selectable	Finger	Blue		vPro		Pro 64
1293-2DU	i5-2520M	8GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg		Finger	Blue		vPro		Pro 64
1293-2CU	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg		Finger	Blue		vPro	G	Pro 64
1293-2BU	i5-2520M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg		Finger	Blue		vPro	G	Pro 64
☞ 1293-23U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg		Finger	Blue	6	vPro	G	Pro 64
☞ 1293-22U	i5-2520M	8GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg		Finger	Blue	6	vPro	G	Pro 64

- ***These models have a depot repair service 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere mobility, performance, and style; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo installed only, and 4GB is maximum memory when customer installed using *4GB PC3-10600 DDR3 L-H SODIMM 55Y3711*)
Optical	None
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	(Premium) **13.3"** (338mm) **HD (1366x768) TFT color**, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external digital monitor support via HDMI™ or Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; *Max external resolution:* 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz
Keyboard	6 row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13]
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*13.3W" (WxDxH):* 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm
Weight[2]	*Integrated battery:* from 3.73 lb (1.69kg); *integrated plus slice battery:* from 4.52 lb (2.05kg)
Case material	*Display cover:* Magnesium/Aluminum + PC/ABS; *Bottom:* Magnesium/Aluminum
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery
Extended Battery	*Some:* Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), RapidCharge
Battery - life[10]	*Integrated battery:* up to 5.2 hr; *integrated plus slice battery:* up to 10.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	None
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)
PCIe Mini Card	Two PCI Express Mini Card slots
WLAN[4]	*Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	*Some:* Wireless WAN upgradable *Some:* Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS *Some:* User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-yr battery - depot repair service / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Genuine Windows® 7 Home Premium 64
- *Some:* Genuine Windows 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies

90-watt AC Adapter (RapidCharge)
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-X1 sheet;

For ThinkPlus™,[22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced May 24, 2011; previous models on May 17, 2011

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ThinkPad® X1 (1294) - Onsite

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB[8] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
1294-3DU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300[28]	WWAN upg	None	Finger	Blue		vPro	G P	Pro 64
1294-2CU	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205[28]	WWAN upg	None	Finger	Blue		vPro	G P	Pro 64
1294-2BU	i5-2520M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg	None	Finger	Blue		vPro	G P	Pro 64
☞ 1294-23U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	Blue	6	vPro	G P	Pro 64
☞ 1294-22U	i5-2520M	8GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg	None	Finger	Blue	6	vPro	G P	Pro 64

- ***These models are part of the Global Models Plus program with limited onsite service[24] 3-year limited warranty***
- ***These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)***

Positioning	*Premiere mobility, performance, and style; one spindle*
Processor	**Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory	8GB max[7] / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo installed only, and 4GB is maximum memory when customer installed using *4GB PC3-10600 DDR3 L-H SODIMM 55Y3711*)
Optical	None
SATA disk	*Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high *Some:* Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ *All:* removable, upgradable, Shock Mounted Hard Drive
mSATA™ SSD	None
Widescreen display	(Premium) **13.3"** (338mm) **HD (1366x768) TFT color**, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus
Graphics	**Intel HD Graphics 3000** in processor, external digital monitor support via HDMI™ or Mini DisplayPort (supports VGA analog monitor via Mini-DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; *Max external resolution:* 2560x1600 (Mini DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz
Keyboard	6 row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13]
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch
ThinkLight™	None
Dimensions[3]	*13.3W" (WxDxH):* 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm
Weight[2]	*Integrated battery:* from 3.73 lb (1.69kg); *integrated plus slice battery:* from 4.52 lb (2.05kg)
Case material	*Display cover:* Magnesium/Aluminum + PC/ABS; *Bottom:* Magnesium/Aluminum
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery
Extended Battery	*Some:* Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), RapidCharge
Battery - life[10]	*Integrated battery:* up to 5.2 hr; *integrated plus slice battery:* up to 10.0 hr
Chipset	**Mobile Intel QM67 Express Chipset**
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)
ExpressCard	None
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)
PCIe Mini Card WLAN[4]	Two PCI Express Mini Card slots *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 *Some:* 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3
WWAN	Wireless WAN upgradable
Modem	None
Bluetooth™	Bluetooth 3.0 wireless, LED indicator
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel AMT	Intel Active Management Technology (iAMT)
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- Genuine Windows® 7 Professional 64

Ready to install applications[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies

90-watt AC Adapter (RapidCharge)
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-X1 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

☞ US models announced May 24, 2011; previous models on May 17, 2011

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ThinkPad® X1 Accessories

Memory[65]

4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	*ann*	*03/02/10*

[65] ThinkPad X1 has only one SO-DIMM socket and doesn't support adding additional memory.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	*ann*	*03/17/09*
USB 2.0 Portable 500GB Hard Disk	45K1690	*ann*	*05/26/09*
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	*ann*	*11/18/08*
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	*ann*	*01/07/10*
Lenovo Slim USB Portable DVD Burner	0A33988	*ann*	*06/14/11*

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:			
ThinkPad Gobi™ Mobile Broadband Option	0A36185	*ann*	*04/12/11*

ThinkPad Expansion

USB 2.0 Port Replicator with Digital Video	0A33942	*ann*	*03/22/11*
Lenovo® Essential Notebook Stand	45J9292	*ann*	*05/12/09*

Keyboard

TrackPoint Cap Collection	73P2698	*ann*	*12/16/03*
Ultraslim Plus Wireless Keyboard and Mouse[52]	0A34032	*ann*	*04/05/11*
USB Numeric Keypad	33L3225	*ann*	*05/01/00*
Preferred Pro USB Keyboard	73P5220	*ann*	*06/21/05*
Enhanced Performance USB Keyboard	73P2620	*ann*	*03/23/04*
ThinkPad USB Keyboard with TrackPoint	55Y9003	*ann*	*08/18/09*
Lenovo® USB Fingerprint Keyboard	73P4730	*ann*	*02/22/05*
Lenovo USB Smartcard Keyboard	51J0155	*ann*	*03/24/09*

[52] Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	*ann*	*05/21/03*
Lenovo Laser Mouse (USB)	41U3074	*ann*	*01/23/07*
ThinkPad USB Laser Mouse	57Y4635	*ann*	*12/15/09*
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	*ann*	*08/27/02*
ThinkPad Travel Mouse (USB, Optical)	31P7410	*ann*	*06/04/02*
ThinkPad Bluetooth Laser Mouse	41U5008	*ann*	*01/22/08*

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	*ann*	*01/07/10*

Modem

USB 2.0 Lenovo Modem	43R1814	*ann*	*02/26/08*

Security

Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
USB Gemplus GemPC Smart Card Reader	41N3040	*ann*	*02/21/06*

Batteries

ThinkPad Battery 39+ (6-cell slice)	0A36279	*ann*	*05/24/11*
ThinkPad External Battery Charger[44]	40Y7625	*ann*	*09/20/05*

[44] Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at **www.lenovo.com/alldaycomputing**

ThinkPad 65W AC Adapter[63]	40Y7696	*ann*	*01/05/06*

[63] *ThinkPad 65W AC Adapter 40Y7696* supports "Rapid Charge" only when ThinkPad X1 system is off.

ThinkPad 90W AC Adapter	40Y7659	*ann*	*09/20/05*
ThinkPad 65W AC Adapter with USB Hub	57Y4600	*ann*	*09/07/10*
90W Ultraslim AC/DC Combo Adapter	41R4493	*ann*	*09/22/09*

More info at **www.lenovo.com/support/poweradapters**

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493			
•iPod and iPhone Charge Tip (L10a)	41R4481	*ann*	*12/18/07*
•Generic Micro USB charge tip (L18)	41R4490	*ann*	*01/06/09*

More information at **www.lenovopowertips.com**

Carrying Cases

Up to 13.3" widescreen models:			
ThinkPad Ultraportable Case	41U5062	*ann*	*05/13/08*
Up to 15.6" widescreen models:			
Lenovo Messenger Max	41U5253	*ann*	*05/01/07*
Lenovo Performance BackPack	41U5254	*ann*	*05/01/07*
ThinkPad Business Topload Case	43R2476	*ann*	*05/13/08*
ThinkPad Business Backpack	43R2482	*ann*	*05/13/08*
ThinkPad Deluxe Expander Case	43R2478	*ann*	*05/13/08*
ThinkPad Executive Leather Case	43R2480	*ann*	*05/13/08*
Wenger Backpack for Lenovo	57Y4271	*ann*	*01/07/10*
Wenger Slim Case for Lenovo	57Y4273	*ann*	*01/07/10*
Wenger Deluxe Slim Case for Lenovo	57Y4272	*ann*	*01/07/10*

More information at **www.lenovo.com/support/cases**
Lenovo luxury cases at **www.lenovoluxurycases.com**

Monitors[64]

ThinkVision® L1711p 17" Monitor	5047HB2	*ann*	*10/20/09*
ThinkVision L1900p 19" Monitor	4431HE1	*ann*	*11/11/08*
ThinkVision L1951p Wide 19" Monitor	2448HB6	*ann*	*10/20/09*
ThinkVision L2250p Wide 22" Monitor	2572HB6	*ann*	*10/20/09*
ThinkVision L2251p Wide 22" Monitor	2572HD6	*ann*	*10/20/09*
ThinkVision L2251x Wide 22" Monitor	2578HB6	*ann*	*10/20/09*
ThinkVision L2321x Wide 23" Monitor	4014HB6	*ann*	*06/10/10*
ThinkVision L2440p Wide 24" Monitor	4420HB2	*ann*	*09/17/08*

[64] Requires the *Lenovo Mini-DisplayPort to VGA Monitor Cable* *0A36536*

More information at **www.lenovo.com/support/monitors**

Monitor Accessories[46]

Lenovo USB-to-DVI Monitor Adapter	45K5296	*ann*	*05/12/09*
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	*ann*	*05/17/11*
ThinkVision Soundbar	45K1263	*ann*	*09/16/08*
Lenovo Security Cable Lock	57Y4303	*ann*	*08/24/10*
Lenovo Easy Reach Monitor Stand	55Y9258	*ann*	*09/22/09*

[46] Compatible on selected Lenovo and ThinkVision monitors.

More information at **www.lenovo.com/support/monitoraccessories**

For more information on accessories:

www.lenovo.com/accessories
Purchase Lenovo accessories

www.lenovo.com/support/accessories
Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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ThinkPad® Multiple Monitor Configurations with *Mini Dock Series 3*

ThinkPad T series Multiple Monitor Configurations with *ThinkPad Mini Dock Series 3 (4337)* using NVIDIA® Optimus™ technology

For more information see: **http://www.lenovo.com/support/thinkpad/optimus-monitors**

Triple Monitor configurations: ThinkPad T420, T420s, and T520 Dual Core *with "ThinkPad Mini Dock Series 3 (4337)"*

ThinkPad T420, T420s, T520 Dual Core			ThinkPad Mini Dock Series 3 (4337)		
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort (2560 x 1600)	Dock DVI-D (1920 x 1200)
1st	2nd	3rd			
1st			2nd	3rd	
1st			2nd		3rd
1st		2nd	3rd		
1st		2nd		3rd	
1st		2nd			3rd

Quad Monitor configurations: ThinkPad T420, T420s, and T520 Dual Core *with "ThinkPad Mini Dock Series 3 (4337)"*

ThinkPad T420, T420s, T520 Dual Core			ThinkPad Mini Dock Series 3 (4337)		
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort # 1 (2560 x 1600)	Dock DVI-D # 1 (1920 x 1200)
1st		2nd	3rd	4th	
1st		2nd	3rd		4th
1st		2nd		3rd	4th
1st			2nd	3rd	4th

Rear view of *ThinkPad Mini Dock Series 3 (4337)*

ThinkPad Mini Dock Series 3 - 90W 433710U

© Lenovo

ThinkPad® Multiple Monitor Configurations with *Mini Dock Plus Series 3*

ThinkPad T and W series Multiple Monitor Configurations with *ThinkPad Mini Dock Plus Series 3 (4338)* using NVIDIA® Optimus™ technology

For more information see: **http://www.lenovo.com/support/thinkpad/optimus-monitors**

Triple Monitor configurations: ThinkPad T420, T420s, T520, and W520 *with "ThinkPad Mini Dock Plus Series 3 (4338)"*

ThinkPad T420, T420s, T520, W520			ThinkPad Mini Dock Plus Series 3 (4338)				
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort # 1 (2560 x 1600)	Dock DVI-D # 1 (1920 x 1200)	Dock DisplayPort # 2 (2560 x 1600)	Dock DVI-D # 2 (1920 x 1200)
1st	2nd	3rd					
1st			2nd	3rd			
1st			2nd		3rd		
1st			2nd			3rd	
1st			2nd				3rd
1st		2nd	3rd				
1st		2nd		3rd			
1st		2nd			3rd		
1st		2nd				3rd	
1st		2nd					3rd
1st				2nd		3rd	
1st				2nd			3rd
1st					2nd	3rd	
1st					2nd		3rd

Quad Monitor configurations: ThinkPad T420, T420s, and T520 *with "ThinkPad Mini Dock Plus Series 3 (4338)"*

ThinkPad T420, T420s, T520			ThinkPad Mini Dock Plus Series 3 (4338)				
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort # 1 (2560 x 1600)	Dock DVI-D # 1 (1920 x 1200)	Dock DisplayPort # 2 (2560 x 1600)	Dock DVI-D # 2 (1920 x 1200)
1st		2nd	3rd	4th			
1st		2nd	3rd		4th		
1st		2nd	3rd			4th	
1st		2nd	3rd				4th
1st		2nd		3rd			4th
1st		2nd			3rd		4th
1st		2nd			3rd	4th	
1st			2nd	3rd		4th	
1st			2nd	3rd			4th
1st			2nd		3rd	4th	
1st			2nd		3rd		4th

Rear view of *ThinkPad Mini Dock Plus Series 3 (4338)*

ThinkPad Mini Dock Plus Series 3 - 90W	***433810U***	Compatible with ThinkPad T420, T420s, and T520 Dual Core
ThinkPad Mini Dock Plus Series 3 - 170W	***433830U***	Compatible with ThinkPad T420, T420s, T520, and W520

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ThinkPad® - TopSeller Services

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:

http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml

TopSeller service upgrade options for ThinkPad L/T/W/X Series

ThinkPad L/T/W & X (excluding tablets) Series with 1-year Depot warranty

3 YEAR Depot Warranty	04W8692
3 YEAR Depot Warranty & ThinkPad Protection	04W8694
3 YEAR Onsite Warranty	04W8693
3 YEAR Onsite Warranty & ThinkPad Protection	04W8695

ThinkPad L/T/W & X (excluding tablets) Series with 3-year Depot warranty

3 YEAR Depot Warranty & ThinkPad Protection	04W8697
3 YEAR Onsite Warranty	04W8696
3 YEAR Onsite Warranty & ThinkPad Protection	04W8698

ThinkPad X Series Tablet with 1-year Depot warranty

3 YEAR Depot Warranty & ThinkPad Protection	04W8781
3 YEAR Onsite Warranty & ThinkPad Protection	04W8782

ThinkPad X Series Tablet with 3-year Depot warranty

3 YEAR Depot Warranty & ThinkPad Protection	04W8700
3 YEAR Onsite Warranty	04W8699
3 YEAR Onsite Warranty & ThinkPad Protection	04W8701

ThinkPad X1 notebook with 3-year Depot warranty

3 YEAR Depot Warranty with Battery Replacement	04W8780
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W8778
3 YEAR Onsite Warranty with Battery Replacement	04W8777
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8779

ThinkPad X120e notebooks with 1-year Depot warranty

3 YEAR Depot Warranty	04W8706
3 YEAR Depot Warranty & ThinkPad Protection	04W8708
3 YEAR Onsite Warranty	04W8707
3 YEAR Onsite Warranty & ThinkPad Protection	04W8709

TopSeller Priority Support

- 24x7 support with priority routing and advanced level technicians

ThinkPad L/T/W/X Series notebooks with 1-year or 3-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	04W8720

* Covered machine must have concurrent warranty coverage.

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Partial list of Lenovo® ThinkPlus Services[22] for ThinkPad notebooks

For more information see: **http://www.lenovo.com/services_warranty/us/en/index.html**

ThinkPlus service upgrade options for ThinkPad W/X series

ThinkPad X100e/X120e notebook with 1-year Depot warranty

2 YEAR Depot Warranty	45K5971
3 YEAR Depot Warranty	45K5972
4 YEAR Depot Warranty	0A34460
1 YEAR Onsite Warranty	45K5968
2 YEAR Onsite Warranty	45K5969
3 YEAR Onsite Warranty	45K5970
4 YEAR Onsite Warranty	0A34462

ThinkPad W/X series notebook with 1-year Depot warranty

2 YEAR Depot Warranty	41C9169
3 YEAR Depot Warranty	41C9170
4 YEAR Depot Warranty	41C9172
5 YEAR Depot Warranty	41C9174
1 YEAR Onsite Warranty	41C9166
2 YEAR Onsite Warranty	41C9167
3 YEAR Onsite Warranty	41C9168
4 YEAR Onsite Warranty	41C9171
5 YEAR Onsite Warranty	41C9173

ThinkPad W/X series notebook with 3-year Depot warranty

4 YEAR Depot Warranty	41C9178
5 YEAR Depot Warranty	41C9180
3 YEAR Onsite Warranty	41C9176
4 YEAR Onsite Warranty	41C9177
5 YEAR Onsite Warranty	41C9179

ThinkPad W/X series notebook with 3-year Onsite warranty

4 YEAR Onsite Warranty	12X5630
5 YEAR Onsite Warranty	43R2162

ThinkPad X1 notebook with 3-year Depot warranty

3 YEAR Depot Warranty with Battery Replacement	04W7783
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W7785
3 YEAR Onsite Warranty with Battery Replacement	04W8259
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8261

ThinkPad X1 notebook with 3-year Onsite warranty

3 YEAR Onsite Warranty with Battery Replacement	04W7787
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W7789

ThinkPlus service upgrade options for ThinkPad T/L series

ThinkPad T/L series notebook with 1-year Depot warranty

2 YEAR Depot Warranty	45K5971
3 YEAR Depot Warranty	45K5972
4 YEAR Depot Warranty	45K5974
5 YEAR Depot Warranty	45K5976
1 YEAR Onsite Warranty	45K5968
2 YEAR Onsite Warranty	45K5969
3 YEAR Onsite Warranty	45K5970
4 YEAR Onsite Warranty	45K5973
5 YEAR Onsite Warranty	45K5975

ThinkPad T/L series notebook with 3-year Depot warranty

4 YEAR Depot Warranty	45K6023
5 YEAR Depot Warranty	45K6025
3 YEAR Onsite Warranty	45K6021
4 YEAR Onsite Warranty	45K6022
5 YEAR Onsite Warranty	45K6024

ThinkPad T/L series notebook with 3-year Onsite warranty

4 YEAR Onsite Warranty	45K6038
5 YEAR Onsite Warranty	43R2162

ThinkPlus Priority Support for enterprise customers

• 24x7 support with priority routing and advanced level technicians

ThinkPad notebook with 1-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	45J9094

ThinkPad notebook with 3-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	45J9095
Add to 4-year warranty coverage - 4-year Priority Support*	45J9096
Add to 5-year warranty coverage - 5-year Priority Support*	45J9097
Add to 3-year warranty coverage - 3-year Priority Support 4-hour response*	45J9101
Add to 4-year warranty coverage - 4-year Priority Support 4-hour response*	45J9102
Add to 5-year warranty coverage - 5-year Priority Support 4-hour response*	45J9103

ThinkPad notebook with 3-year Onsite (GMP) warranty

Add to 3-year warranty coverage - 3-year Priority Support*	45J9098
Add to 4-year warranty coverage - 4-year Priority Support*	45J9099
Add to 5-year warranty coverage - 5-year Priority Support*	45J9100
Add to 3-year warranty coverage - 3-year Priority Support 4-hour response*	45J9104
Add to 4-year warranty coverage - 4-year Priority Support 4-hour response*	45J9105
Add to 5-year warranty coverage - 5-year Priority Support 4-hour response*	45J9106

ThinkPad Workstation notebook with 1-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	45J9107

ThinkPad Workstation notebook with 3-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	45J9108
Add to 4-year warranty coverage - 4-year Priority Support*	45J9109
Add to 5-year warranty coverage - 5-year Priority Support*	45J9110
Add to 3-year warranty coverage - 3-year Priority Support 4-hour response*	45J9114
Add to 4-year warranty coverage - 4-year Priority Support 4-hour response*	45J9115
Add to 5-year warranty coverage - 5-year Priority Support 4-hour response*	45J9116

ThinkPad Workstation notebook with 3-year Onsite (GMP) warranty

Add to 3-year warranty coverage - 3-year Priority Support*	45J9111
Add to 4-year warranty coverage - 4-year Priority Support*	45J9112
Add to 5-year warranty coverage - 5-year Priority Support*	45J9113
Add to 3-year warranty coverage - 3-year Priority Support 4-hour response*	45J9117
Add to 4-year warranty coverage - 4-year Priority Support 4-hour response*	45K1520
Add to 5-year warranty coverage - 5-year Priority Support 4-hour response*	45K1521

* Covered machine must have concurrent warranty coverage.

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Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

[1] Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.

[2] **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.

[3] **Thinness** may vary at certain points on the system.

[4] **Wireless capability:** Requires compatible wireless-enabled options sold separately.

[5] **TAA:** ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.

[6] **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.

[7] **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.

[8] **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

[9] **CD/DVD drive speeds** list maximum rates; rates are variable and are often less than the maximum.

[10] **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. For the ThinkPad X300, battery life is based on Business Winstone Battery Mark 2002. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

[11] **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.

[12] **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

[13] **Internet access not included.**

[14] **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

[16] **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.

[17] **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

[18] **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.

[19] **EasyServ depot repair service:** In the United States call 1-800-426-7378. The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.

[20] **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

[21] **For combination drives**, maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

[22] **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, Lenovo may choose to perform service at the depot repair center. Calls must be received by 5 pm local time in order to qualify for Next Business Day service. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

[23] **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

[24] **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

[26] **Full-size keyboard:** As defined by ISO/IEC 15412.

[27] **Based on IEEE 802.11a and 802.11b.** A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

[28] **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

[30] **Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.

[32] **Wireless:** Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

[36] **Wireless upgradable** allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

[37] **Optimus graphics** Optimus only switches in Windows 7 environment. It performs as discrete graphics in Windows Vista or Windows XP Professional environment.

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